

STATE OF MISSISSIPPI

DAVID RONALD MUSGROVE, GOVERNOR MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY MAY -7

CHARLES H. CHISOLM, EXECUTIVE DIRECTOR

May 2, 2001

CWAFS

Honorable J. Ed Morgan, Mayor City of Hattiesburg P O Box 1898 Hattiesburg, Mississippi 39403

Dear Mayor Morgan:

Re:

Hattiesburg South WWTF

NPDES Permit NO. MS0020303

Hattiesburg North WWTF

NPDES Permit NO. MS0020826 RR Inspection / Forrest County

Enclosed are copies of the Reconnaissance Inspection Reports for the inspections that were performed at the referenced Wastewater Treatment Facilities on April 5, 2001. You should use the results of these inspections as a guide for complying with requirements found in your NPDES permit.

If you have any questions concerning this matter, please contact us at (601) 961-5222.

Sincerely,

Hamp Sterling, F.E.

Municipal and Private Facilities Branch

Environmental Compliance and Enforcement Division

Enclosures

CC:

SRO Mr. Michael Hom, EPA THIS COPY

						<i>;</i>		1 . !	
					,		•	1	
								1	
			,	•				. !	
								. 1	
•		,						1	1
				. •				·	1
							, , , , , , , , , , , , , , , , , , , ,		1
						i i i i i i i i i i i i i i i i i i i			
	•								
								÷	
	•								
									•
	,			t e					
								•	
			·						
									•

	N INSPECTION REPORT NPDES NO. 20826
Name of Facility (Mun/,Ind.,Private)Harden	
1 December Obstations - Was W. Wa	A Chlorianten and Contact Charles
1. Pumping Station: Yes X No	
a. Dual Pumps: Yes X No	
b. Pumps Operable: Yes_X_No	
Comment: None	b. Baffles adequate: Yes No
2. Aeration Cell: (2)	<pre>c. Housing: Yes X No d. Cylinder on hand: Yes X No</pre>
a. Color: <u>Duckweed</u>	How many: 2 - 1 ton
b. Odor: YesNo_X	
c. Floating solids:None_X Few Many	
d. Effluent structure condition:	g. Chlorine residual: 0.57 Mg/l Yes X No
Good_X_ Poor e. Dikes:	Comment: None
	5.Effluent:
Condition: <u>Good</u> Freeboard: <u>9</u> FT.	
Freeboard: 9 FT. Grass: Maintained	a. Color: Turbid Clear_X b. Odor: Yes No_X
f. Aerators:	c. Sample taken: Yes No_X
Number: 20	Comment: None
Operable: Yes_X No	Comment C. Rotte
Operable: Yes_X_No Timed: Yes_X_No	6.General:
Comment: None None	a. Fence: Yes X No
Comments.	Locked: Yes X No
3. Settling Cell:	b. Upkeep: Good X Poor
a. Color: <u>Duckweed</u>	c. Access road condition: Good X Poor
b. Odor: Yes No_X	· ·
c. Floating solids: None X Few_ Many_	
d. Skimming: Yes X No	
e. Effluent structure condition:	7. Certified Operator:
Good X Poor	Yes_X_No Date departed
f. Dikes:	Name: Chuck Henderson
Condition: Good	Cert. No.: 3792 Class: III Exp: 10-1-02
Freeboard: 10 FT.	
Grass: Maintained	
Comment: None	,
8. Inspectors recommendations to person c	ontacted: None
9. Verbal commitments of person contacted	to correct problems: N/A
·	
,	
10. General comments: None	
11. Does this situation warrant action from	m the Jackson Office: Yes No_X
12. Follow-up inspection scheduled:	Yes Date No_X
ollow up ladpeouton ounemaked.	
	Inspector: Jusosh Rowell
	The state of the s
	Date: <u>4-5-01</u> Trime: <u>11:45 a.m.</u>
•	



e of Facility (Mun.,Ind.,Private) Hanty Forrest Person Contacted	
Pumping Station: Yes X No	4.Chlorinator and Contact Chamber:
a. Dual Pumps: Yes X No	
b. Pumps Operable: Yes X No	
Comment: None	b. Baffles adequate: Yes X No
Commenc. None	c. Housing: Yes X No
Aeration Cell: (3)	d. Cylinder on hand: Yes X No
a. Color: Clear green	How many: $2 - 1$ ton
b. Odor: Yes No X	
c. Floating solids:None X Few Many	
d. Effluent structure condition:	g. Chlorine residual: 0.11 Mg/l YesN
Good X Poor	Comment: Dechlorination in use
e. Dikes:	Commenc. Decirorination in use
Condition: Good	5.Effluent:
Freeboard: 10 FT.	a. Color: Green Turbid X Clear
Grass: Maintained F1.	
f. Aerators:	b. Odor: Yes No c. Sample taken: Yes No
— ,	Comment: NoneNC
Number: 72 total Operable: Yes_X No	
Timed: Yes X No	
Comment: None	
Comment: None	
Sattling Call.	
Settling Cell:	b. Upkeep: Good X Poor c. Access road condition: Good X Poor
a. Color: Clear green b. Odor: Yes No_X	
c. Floating solids:None_X Few Many	
d. Skimming: Yes_X No e. Effluent structure condition:	7. Certified Operator:
Good X Poor	Yes X No Date departed
f. Dikes:	Name: Chuck Henderson
Condition: Good	Cert. No.: 3792 Class: III Exp: 10-1-02
Freeboard: 10 FT.	0020. 10 <u>0732</u> 0200.22202.
Grass: Maintained	
Comment: None	;
Inspectors recommendations to person co	ontacted: None
· ·	
;	
Verbal commitments of person contacted	to correct problems: N/A
•	
General comments: None	
Does this situation warrant action from	m the Jackson Office: Yes No
	<u> </u>
Follow-up inspection scheduled:	Yes Date No
•	Inspector: Josh Rowell
	Inspector. /:Doosn kowerr





STATE OF MISSISSIPPI

DAVID RONALD MUSGROVE, GOVERNOR

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY 2001 MAR - 9 12: 08

CHARLES H. CHISOLM, EXECUTIVE DIRECTOR

March 5, 2001

Honorable J. Ed Morgan, Mayor City of Hattiesburg P O Box 1898 Hattiesburg, Mississippi 39403

Dear Mayor Morgan:

Re: Hattiesburg South WWTF MS0020303

NPDES Permit NO. MS0020303

Hattiesburg North WWTF MS0020826

NPDES Permit NO. MS0020826 CMI Inspection / Forrest County

Enclosed are copies of the Compliance Monitoring Inspection Reports and sampling results for the inspections that were performed at the referenced Wastewater Treatment Facilities on October 24, 2000. You should use the results of these inspections as a guide for complying with requirements found in your NPDES permit.

If you have any questions concerning this matter, please contact us at (601) 961-5222.

Sincerely,

Hamp Sterling

Municipal and Private Facilities Branch

Environmental Compliance and Enforcement Division

CHS:chs

Enclosures

cc:

SRO

Mr. Michael Hom, EPA THIS COPY FOR

			1
			* * 1
		•	, 1
			1
		•	
	•		
	•	v v	
	4		1
			. 1
			1
	•		, 1
	•		· · · · · · · · · · · · · · · · · · ·
			1
			1
	•		
		•	1
			'
	,		
	,		
			•
	* .	· •	
			•
			•
			•
•			
		•	•
			•
			A 1
			•
		· ·	
	•	,	
	1		
		•	

me of Facility (Mun., Ind., Private) <u>Hat</u> unty <u>Forrest</u> Person Contacted	
D. C.	A Chlorianton and Contact Chambon
Pumping Station: Yes X No	4.Chlorinator and Contact Chamber:
a. Dual Pumps: Yes X No	Yes X No
b. Pumps Operable: Yes_X_No	a. Operating: Yes X No
Comment: None	b. Baffles adequate: ? Yes No_
7	c. Housing: Yes_X_No_ d. Cylinder on hand: Yes_X_No_
Aeration Cell: (2) a. Color: <u>Duckweed cover</u>	How many: <u>Did not view</u>
b. Odor: Yes No_X_	
c. Floating solids: None X Few Many	
d. Effluent structure condition:	g. Chlorine residual: 0.25 Mg/l Yes_X No_
Good_X_ Poor	Comment: None
e. Dikes:	COmment. Notice
	5.Effluent:
Condition: Good Freeboard: 8-10 FT.	a. Color: Turbid Clear
Grass: CutFT.	b. Odor: TurbidClear_ b. Ves No_
f. Aerators:	c. Sample taken: Yes X No.
Number: 22	C. Sample taken: res_x_ No_ Comment: None
Operable: Yes X No	Comment. None
Operable: Yes_X No Timed: Yes_X No	6.General:
Comment: None Tes_X NO	a. Fence: Yes_X_No_
Comment. None	Locked: Yes X No
Settling Cell:	b. Upkeep: Good X Poor_
a. Color: <u>Duckweed cover</u>	c. Access road condition: Good X Poor
b. Odor: YesNo_X	d. Safety hazards: Yes No_
c. Floating solids:None_X FewMany	Comment: None None
d. Skimming: Yes_X_No	Commerce
e. Effluent structure condition:	7. Certified Operator:
Good_X_ Poor	Yes_X NoDate departed
f. Dikes:	Name: Chuck Henderson
ondition: Good	Cert. No.: 3792 Class: III Exp: 10-1-02
Freeboard: 8-10 FT.	0010, 110 <u>5772</u> 02000. <u>111</u> 02p10_1 V2
Grass: Cut	•
Comment: None	
Commente,	
Inspectors recommendations to person con	ntacted: None
inspectors recommendations to person con	110120
Verbal commitments of person contacted	to correct problems: N/A
General comments: Midge flies very th:	ick at effluent structure.
Does this situation warrant action from	the Jackson Office: Yes No_
	,
Follow-up inspection scheduled:	Yes Date No_
	Inspector: // Errol White

· · · ·
. *
-
•
,
,
. •
, ,
,
ı
l
1
1
1
i
· •
1
1
1
1
1

Sch	eduzed Oct. 2000 AERATED LAGOON	INSPECTION REPORT NP	DES NO. 20303
Vame.	e of Facility (Mun), Ind., Private)Hat	tiesburg South Lagoon	
	atyForrestPerson Contacted_		Phone No. 545-4531
		114 6 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	
_			
1.	Pumping Station: Yes X No	4.Chlorinator and Con	
*	a. Dual Pumps: Yes X No		Yes X No
	b. Pumps Operable: Yes_X_No	a. Operating:	Yes_X_No
	Comment: None		Yes X No
		c. Housing:	
2.		d. Cylinder on hand	l: Yes <u>X</u> No
	a. Color: Green	How many: <u>Did</u>	not view
	b. Odor: Yes No X		t chamber:YesNo_X
	c. Floating solids:None_X Few Many		on line:Yes <u>N/A</u> No
	d. Effluent structure condition:		1: <u>0</u> Mg/1 YesNo
	Good_X_ Poor	Comment: None	
	e. Dikes:		
	Condition: Good	5.Effluent:	
	Freeboard: 10 FT.	a. Color: Green	
	Grass: Cut	b. Odor:	Yes No_X
	f. Aerators:	c. Sample taken:	Yes_X_ No
	Number: 72 (?)		ite not easily
	Operable: Yes_X_ No	accessed.	
	Timed: Yes_X No	6.General:	
	Comment: None	a. Fence:	Yes <u>X</u> No.
	•	Locked:	Yes <u>X</u> No
3.	Settling Cell:	b. Upkeep:	
	a. Color: Green	c. Access road cond	ition:Good_X_Poor
	b. Odor: Yes No_X_	d. Safety hazards:	YesNo_X
	c. Floating solids:None_X Few Many	Comment: None	
	d. Skimming: Yes X No		
	e. Effluent structure condition:	Certified Operator	
	Good X Poor	Yes_X_ No Date	
	I. Dikes:	Name: <u>Chuck Hend</u>	
	Condition: Good	Cert. No.: <u>3792</u> Class	: <u>III Exp: 10=1=02</u>
	Freeboard: 10 FT.		
	Grass: Cut		•
	Comment: None	•	•*
	•		
8.	Inspectors recommendations to person cor	ntacted: None	
		•	
9.	Verbal commitments of person contacted t	to correct problems: N/	A
			•
10.	General comments: None		-
11.	Does this situation warrant action from	the Jackson Ullice:	Yes No_X
12	Follow-up inspection scheduled:	Yes	Date No_X
12.	rotton up thapecoton scheduted.	ies	
		Tnanasta-	: //Errol White
		inspector	· VETTOT WILLIAM
		Data: 10 04 00	m: V. 2.30
		Date: 10-24-00	Tipe: 2:30 p.m.

	·	•					
					•		
		•					
;		•		A 2			
			,		·		
				4			
				•			
		: .					
			٠.	. *		***	
•				•		•	,
	. •	<i>:</i>		•			
						•	
							•
			•		•		
				r r			
					•		
				:			
		•	,	•			
	•	•					
•	·	•			V	•	
	I					4	
	•			:		1"	
	·						
					•		
		• •					
			., (•		
			·			. •	
	•			·			
			• •		•	e	
			. :	. "		•	
			٠.		·	**	
		•		•			
				•		• .	
	e e						
			•		· · · · · · · · · · · · · · · · · · ·		
							·
	(•			٠
		• .					
•							

BUREAU OF POLLUTION CONTROL SAMPLE REQUEST FORM

Lab Bench No.

•.		. <u>DA</u>	· KEQUEST TO		7.7.	
GENERAL INFORMATIO	N: Facility	y Name	HATTIESBURG A	ERATED LAGOO	N - NORTH	•
	0800	·	NPD	ES Permit No.	. 20826	
Discharge No00				Date Reques	·	
Sample Point Ident				•	,	
Requested By Co	OMPLIANCE MC	NITORING		Data To	MIKE FREIMAN	
Type of Sample: G		omposite (Flow) (Time	e) Other	()	
SAMPLE IDENTIFICAT		•				
Environment Condit		EAR		Collec	cted By Epison	- WHIT
	Cfuent		حسرس به	***************************************		
Type		meters	Pre	servative	Date	Time
1. GRAB	BOD-SS		COOL		10-24-00	1330
2. GRAB	FECAL		COOL		10-24-00	
3.						
4.						
5.	******	,		·		
FIELD:			•		•	×
Analysis	Compute	r Code	Request R	esults	Analyst	Date
pH pH	(000		(X) 7.Z			10 24
D.O.	(000	•	()			
Temperature	(000	010)	()			
Residual Chlorine	(050	060)	(X) O.Z.4		Em	10-24-
Flow	(074	060)	(X) 0,70	3L MGD	_5,	10-24-6
TRANSPORTATION OF	SAMPLE: Bu	s ()R	RO Vehicle ()	Other (X)	*	
LABORATORY: Recei		the C	inno.		-26 00 T	ime <u>0931</u>
Recorded By		-77 ·_	Dat	e Sent to Sta	ate Office	
	Computer		•			Date
Analysis	Code	Request	Res	ult ,	Analyst	Measure
BOD ₅	(000310)	$\overline{\bowtie}$	5.0	mg/1	105	* 10-27
COD ⁵	(000340)	()		mg/1		
TOC	(000680)	()		mg/1		
Suspended Solids	(099000)	\ll	17.0	mg/1	KF	10-37-
TKN	(000625)	()		mg/1		
Ammonia-N	(000610)	() ·		mg/1		
Fecal Coliform(1)		€Q.		es/10 0 ml	KE BOR	<u>*10-24</u>
Fecal Coliform(2)	(074055)	()	coloni	es/100 ml	,	*
Total Phosphorus	(000665)	()		ung/l		
Oil and Grease(1)	(000550)	()		mg/1		
Oil and Grease(2)		()		mg/l		
Chlorides	(099016)	()		ing/1		
Phenol	(032730)			mg/1		
	(001034)	()		mg/l		
Hex. Chromium	(001032)	()		mg/1		
Zinc	(001092)	()		mg/1		
Copper	(001042)	()		mg/l		
Lead	(017501)	()		mg/1		
Cyanide	(000722)	()		mg/1		
- ,	· •	$\overline{()}$				
· · · · · · · · · · · · · · · · · · ·		()				
		()	,	-		
,	·	$\dot{}$,
	•	òò		-		
		65		-		
	·	\sim	-	-		1
		175	<u> </u>			
	*					
		()				
		()				
Remarks	·			•		in the second se

7700

. 1
1
!
1
1
:
· · · · · · · · · · · · · · · · · · ·
,
1
•
·
\(\)

BUREAU OF POLLUTION CONTROL SAMPLE REQUEST FORM

Lab Bench No.: 6586

Cost Code:

I. GENERAL INFORMATION:

Facility Name: Hattiesburg Aerated Lagoon - North

County Code: 0800

Date Requested:

Discharge No: 001

Sample Point Identification:

Requested By: Compliance Monitoring

Data To: Mike Freiman

NPDES Permit No.: 20826

Type of Sample: Grab: (X) Composite: Flow: Time:

Other:

II. SAMPLE IDENTIFICATION:

Environment Condition: Clear

Collected By: E. White

Where Taken: Effluent Structure

	Type	Parameters	Preservative	Date	Time
1.	Grab	BOD-SS	Cool	10-24-00	1330
2.	Grab	Fecal	Cool	10-24-00	1330
3.			·		,
4.					
5.					
6.				·	

III. FIELD:

Analysis	Computer Code	Req	Results	Analyst	Date
PH	000400	X	7.2	EW	10-24-00
D.O.	000300				
Temperature	000010		•		
Residual Chlorine	050060	,X	.0.25	EW	10-24-00
Flow	074060	X	0.7936 MGD	EW	10-24-00

IV. TRANSPORTATION OF SAMPLE:

Bus:

RO Vehicle:

Other: (X)

V. LABORATORY:

Received by: Kathy Farris

Date: 10-26-00

Time: 0930

Recorded by: Tammy Sawyer

Date Sent to State Office: 11-7-00

VI. Remarks:

•						
			•			
			•			
			•			
	1					
		•		. ,		• .
					•	
	<i>t</i> .					
	•				• .	
				•		
			•			
•				e ^r		
				·		
					:	
				·	•	
		•				
						•
			•			
						•
		·				
				; ·		
				•		
			•	٠,		
· · · · · · · · · · · · · · · · · · ·						•
·			<i>′</i> .			

TARGET COMPOUND LIST WET CHEMISTRY PARAMETERS

Lab Bench No.: 6586

Analysis	Computer Code	Req	Result	Analyst	Date Measured or Date Test Initiated
BOD	000310	X	5.0 mg/l	KF	10-26-00
COD	000340		mg/l		
TOC	000680		mg/l		
Suspended Solids	099000	X	17.0 mg/l	KF .	10-27-00
TKN	000625		mg/l		
Ammonia-N	000610		mg/l		-
Fecal Coliform	074055	X	110 Colonies/100ml	DR	10-24-00
Total Phosphorous	000665		mg/l		,
Oil & Grease	000550		mg/l		·
Chlorides	099016		mg/l	·	
Phenol	032730		mg/l		
Cyanide	000722		mg/l		· · · · · · · · · · · · · · · · · · ·
Nitrate-Nitrite	000630		mg/l		
Alkalinity	000410		mg/l		4
Hardness	000900		mg/l		
Hex. Chromium	001032		mg/l		
pН			· ,		
Conductance					
ì		1			,
	-				

								1.	
							•	'	
					e	·	· •	1	
			•			•		,	
	•	• •		4.					
	•		,				•		
								1	
					•			1	I
		·							1
		•							1
	•							•	1
		,				4	•		1
)	1
			•						'
	•	~		•					,
	;						,		1
					•				1
				•		•			1
							•		. 1
•								:	1
		V							1
						,			1
		•		•	*.		• •		1
			•		* .				
					* .				
			•				•		
									1
			1.		•				•
	•	•		•			:		
	*	•			4		•		
					•	• •	•		
			•						
					•				
	•		•		,	•			
			•		•		1		
		•			· · · · · · · · · · · · · · · · · · ·			•	
	•					*			
				•	•				
			•						
			•						
			•		•				
			·						
		·						•	
			•						
		,				• •			
				٠.		•			
			\$						
	•								
	•		•						
		,				•			
			•						

BUREAU OF POLLUTION CONTROL SAMPLE REQUEST FORM

TKN (000625) () mg/1 Ammonia-N (000610) () mg/1 Fecal Coliform(1) (074055) ()			•		•	
C. CENERAL INFORMATION: Facility Name MATTIESBURG AERATED LAGGON - SOUTH	•	DIDEA	U OF POILUTION	ו כטאדפטן		·
General Information: Facility Name	•				h Ronah Na	
County Code		<u>s</u>	AMPLE REQUEST	FURM La	b bench No.	
County Code	×		****			
Date Requested Sample Form Identification EFFLUENT - NORTH DISSURAGE Requested By			HATTIESBU	RG AERATED LAG	DON - SOUTH	
Sample Point Identification	County Code					
Requested By	Discharge No.	001		Date Reque	sted	
Requested By	Sample Point Ide	ntification EFFLUI	ENT - NORTH DI	SCHARGE		*
Type of Sample: Crab R) Composite (Flow) (Time) Other () SAMPLE IDENTIFICATION; Environment Condition CFA/2 Collected By CACO COLL COLL	Requested Ry	COMPLIANCE MONITOR	ING	Data To	MIKE FREIMAN	1
SAMPLE IDENTIFICATION:	Type of Sample:	Crab (Y) Composite	(Flow) (T	ime) Other		_
Environment Condition	CAMBLE IDENTIFIC	ATION.	, , , , ,			
Where Taken			1	Colle	cted By	in ditte
Type					cted by Trefet C	<u> </u>
1. GRAB BOD-SS COOL 10.24-CO 1415 2. GRAB FECAL COOL 12.24-CD 1415 3. 4. 5. 1. FIELD: Analysis Computer Code (000400) (X)		struct stru	CHICK _		. D-4-	T
2. GRAB FECAL COOL Pe-24-Cp 1415 3.	<u>Type</u>		. -			
3. 4. 5. FIELD: Analysis	1. GRAB					
3. 4. 5.	2. GRAB	FECAL			10-24-00	1415
5. FIELD: Analysis Computer Code Request Results Analyst Date D. 0. (000300) CX CV CV CV CV CV CV CV	3.					
FIELD: Analysis Computer Code Request Results Analyst Date D. O. (000400) (X) 7.6 (2.9)	4.			•		
FIEID: Analysis Computer Code Request Results Analyst Date D. O. (000300) ()	5	<u> </u>			· · · · · · · · · · · · · · · · · · ·	
Analysis						
Discrimination Dis		Computer Code	Remiect	Results	Analvet	Date
D.O. (000300) ()					<u> ۱۱۱۱۵۱۶۵۲</u>	
Temperature		•		1.6	<u> </u>	10-24-0
Residual Chlorine		• • •				· · · · · · · · · · · · · · · · · · ·
TRANSPORTATION OF SAMPLE: Bus () RO Vehicle () Other ()		•				
Flow	Residual Chlorin	• • •		<u> </u>		
TRANSPORTATION OF SAMPLE: Bus () RO Vehicle () Other () Date IO - ZL OU	Flow	(074060)	(X)	7.69 46	DEN	10-24-0
ABORATORY: Received By Recorded By Date 10 - 21 - 00		F SAMPLE: Bus ()	RO Vehicle () Other (+)		
Recorded By					$\overline{2(\cdot,0)}$ Ti	me 093
Analysis			D			
Analysis	Recorded by	Computor		dec bene to be		Date
SOD (000310) (x)		•	מ	2001+	Analwat	
COD ⁵ (000340) () mg/l TOC (000680) () mg/l Suspended Solids (099000)			. —		Allalyst	
TOC (000680) () mg/1	BOD ₅	•	25.0			10-06-
Suspended Solids (099000)	COD	• • • • • • • • • • • • • • • • • • • •			· · · · · · · · · · · · · · · · · · ·	
TKN (000625) () mg/l (000610) () mg/l (00065) () mg/l (000665) () mg/l (000666) () mg/l (0			· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·	
Ammonia-N (000610) ()	Suspended Solids	(099000) 🚫	470	mg/1	KF	10-27-0
Fecal Coliform(1) (074055) Colonies/100 ml	TKN	(000625)		mg/l		-
Fecal Coliform(1) (074055) Colonies/100 ml	Ammonia-N	(000610) ()		mg/1		•
Fecal Coliform(2) (074055) () colonies/100 ml			Fix) colo		OR	*10-24-
Total Phosphorus (000665) () mg/1 0il and Grease(1) (000550) () mg/1 0il and Grease(2) (000550) () mg/1 Chlorides (099016) () mg/1 Phenol (032730) () mg/1 Total Chromium (001034) () mg/1 Hex. Chromium (001032) () mg/1 Zinc (001092) () mg/1 Copper (001042) () mg/1 Lead (017501) () mg/1 Cyanide (000722) () mg/1 () () () () () () () () () () () () ()			colo	mies/100 m1		*
Oil and Grease(1) (000550) () mg/1 Oil and Grease(2) (000550) () mg/1 Chlorides (099016) () mg/1 Phenol (032730) () mg/1 Total Chromium (001034) () mg/1 Hex. Chromium (001032) () mg/1 Zinc (001092) () mg/1 Copper (001042) () mg/1 Lead (017501) () mg/1 Cyanide (000722) () mg/1 () ()						
Oil and Grease(2) (000550) () mg/1 Chlorides (099016) () mg/1 Phenol (032730) () mg/1 Total Chromium (001034) () mg/1 Hex. Chromium (001032) () mg/1 Zinc (001092) () mg/1 Copper (001042) () mg/1 Lead (017501) () mg/1 Cyanide (000722) () mg/1 () ()						
Chlorides (099016) () mg/1 Phenol (032730) () mg/1 Total Chromium (001034) () mg/1 Hex. Chromium (001032) () mg/1 Zinc (001092) () mg/1 Copper (001042) () mg/1 Lead (017501) () mg/1 Cyanide (000722) () mg/1 () () () () () () Remarks						
Phenol (032730) () mg/1 Total Chromium (001034) () mg/1 Hex. Chromium (001032) () mg/1 Zinc (001092) () mg/1 Copper (001042) () mg/1 Lead (017501) () mg/1 Cyanide (000722) () mg/1 () () () () () () Remarks					·	
Total Chromium (001034) () mg/1 Hex. Chromium (001032) () mg/1 Zinc (001092) () mg/1 Copper (001042) () mg/1 Lead (017501) () mg/1 Cyanide (000722) () mg/1 () () () () () Remarks					<u> </u>	
Total Chromium (001034) () mg/1 Hex. Chromium (001032) () mg/1 Zinc (001092) () mg/1 Copper (001042) () mg/1 Lead (017501) () mg/1 Cyanide (000722) () mg/1 () () () () () Remarks	Pheno1	(032730) ()	·	mg/l		
Hex. Chromium (001032) () mg/1 Zinc (001092) () mg/1 Copper (001042) () mg/1 Lead (017501) () mg/1 Cyanide () () () () () () () () Remarks		(001034)				
Zinc (001092) () mg/1 Copper (001042) () mg/1 Lead (017501) () mg/1 Cyanide (000722) () mg/1 () () () () () Remarks			-			
Copper (001042) () mg/1 Lead (017501) () mg/1 Cyanide (000722) () mg/1 () () () () () () () () () (- · · · · · · · · · · · · · · · · · · ·			
Lead (017501) () mg/1 Cyanide (000722) () mg/1					 	
Cyanide (000722) () mg/1 () () () () () () () () () () () () ()	• •					· ·
() () () () () () () () () ()					· ·	
() () () () () () () () () ()	Cyanide	(000722) ()		mg/l	·	
() () () () () () () () () ()	,	()		<u> </u>		·
() () () () () () () () () ()		()				-
Remarks				 -		
Remarks				-		
Remarks		· · · · · · · · · · · · · · · · · · ·				•
Remarks			• •			
Remarks						
Remarks		()	<u> </u>			
Remarks		()				
Remarks						
Remarks			,			-
	Pomarka					
*Date of Test Initiation	Venarks	· · · · · · · · · · · · · · · · · · ·	-	· ·		
AUSTO OF LOCE (DITISTION	#D+++	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4			<u> </u>	· · · · · · · · · · · · · · · · · · ·
The of fest initiation	ruate of Test in	rtiation				ノクラ
7700 L587	7700				65	5 /

•
•
•
•

BUREAU OF POLLUTION CONTROL SAMPLE REQUEST FORM

Lab Bench No.: 6587

Cost Code:

I. GENERAL INFORMATION:

Facility Name: Hattiesburg Aerated Lagoon - South

County Code: 0800

NPDES Permit No.: 20303

Discharge No: 001 Date Requested:

Sample Point Identification: Effluent

Requested By: Compliance Monitoring

Data To: Mike Freiman

Type of Sample: Grab: (X) Composite: Flow: Time: Other:

II. SAMPLE IDENTIFICATION:

Environment Condition: Clear

Collected By: E. White

Where Taken: Effluent Structure

	Type	Parameters	Preservative	Date	Time
1.	Grab	BOD-SS	Cool	10-24-00	1415
2.	Grab	Fecal	Cool	10-24-00	1415
3.					
4.					
5.					····
6.				•	

III. FIELD:

Analysis	Computer Code	Req	Results	Analyst	Date
PH	000400	X	7.6	EW	10-24-00
D.O.	000300	1			
Temperature	000010	†			
Residual Chlorine	050060	<u> </u>			
Flow	074060	X	7.69 MGD	EW	10-24-00

IV. TRANSPORTATION OF SAMPLE:

Bus:

RO Vehicle:

Other: (X)

V. LABORATORY:

Received by: Kathy Farris

Date: 10-26-00

Time: 0930

Recorded by: Tammy Sawyer

Date Sent to State Office: //- 7-00

VI. Remarks:

					•	A
		•		,		•
	*	••	•		•	
·	1	A	, <u>*</u>	•	•	
				•		
	•			- 'S		
	•			*		
	•		**	λ,		
,		•			•	
		¥	•	•		
	•			i	•	•
		•		*		
·						*
						•
	,					
	•	· •	•			
	č.		• ,			*
		• •		•		
		. *				•
•	•			•		
				*		
	•	4				
				•		•
		• •				
	•					
	•				•	
	* * * * * * * * * * * * * * * * * * *	,				
	•		í			
•	*	•		,		*
· · · · · · · · · · · · · · · · · · ·	,			•		
		,			•	
•			•			
		•••	,	•	,	•
				•		a .
					•	4
•					•	
				and the second s		
	·	•				
•		,	•		7 * · · ·	
			• • • •			
	* * *					
	,					•
	•					
•	Υ		•			
		• • •	• •	,		
		•			•	
. >			•			•
					•	
			•	e		
		-				
• • • • • • • • • • • • • • • • • • •					•	
					<u> </u>	
,					•	
•			*			
	•				**	

TARGET COMPOUND LIST WET CHEMISTRY PARAMETERS

Lab Bench No.: 6587

Analysis	Computer Code	Req	Result	A	Analyst	Date Measured or Date Test Initiate
BOD	000310	X	25.0	mg/l	KF	10-26-00
COD	000340			mg/l		
TOC	000680	1	,	mg/l		
Suspended Solids	099000	X	47.0	mg/l	KF	10-27-00
TKN	000625			mg/l		
Ammonia-N	000610			mg/l		
Fecal Coliform	074055	. X	500 Colonies/1	00ml	DR	10-24-00
Total Phosphorous	000665			mg/l		
Oil & Grease	000550			mg/l		
Chlorides	099016	١.	***************************************	mg/l		
Phenol	032730	1		mg/l		
Cyanide	000722			mg/l		
Nitrate-Nitrite	000630			mg/l		
Alkalinity	000410			mg/l		
Hardness	000900-		This is a second control of the second contr	_mg/l_		
Hex. Chromium	001032			mg/l		
pH						
Conductance						
•						· .
	•					

· · · · · · · · · · · · · · · · · · ·	
	•
	•
	•
	·
	•
	•
	,
	•
	·
· · · · · · · · · · · · · · · · · · ·	*
	1
	ı
	1
	1
	'
	•
	,
	ı
	I
	1
	· 1
	. 1
	i i
	1



MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

James I. Palmer, Jr., Executive Director

May 17, 1999

Mr. Chuck Henderson, Manager Water and Sewer Department City of Hattiesburg P. O. Box 1898 Hattiesburg, Mississippi 39403

Dear Mr. Henderson:

Re: NPDES Permit No. MS002303 001 & 002 Hattiesburg South Facility Compliance Inspection (CEI/3560)

Enclosed is a copy of the compliance inspection report that was performed at the above referenced facility on March 23, 1999. The results of this inspection should be used by you as a guide for complying with requirements found in your NPDES permit.

If you have any questions concerning this matter, please contact us at (601)961-5271.

Sincerely.

MidMael J. Freiman

Municipal Permit Compliance Branch

Enclosure

cc: SRO

Mr. Michael Hom, USEPA THIS COPY FOR

		•		
	,		•	
			•	
	•			
		• •		
				·
			e e e e e e e e e e e e e e e e e e e	
		·		
		•		
			1.0	
		•		
	·			•
		÷ .		
		•		
			•	
			·	
		•		
			•	
	• .		And the second second	
	•			
		· •	,	
	,	•		
			ϵ^* .	
	1			
				•
)			
· ·	,		•	
				• ,
				S
	•	, ,		
		•		
		•		
			•	
. •				



Transaction Code

EPA

NPDES

United States Environmental Protection Agency,

YR/MO/DAY

Washington, D.C., 20460

Inspector

Inspection Type

Form Approved OMB No.2040-0003 Approval Expires 7-31-85

Facility Type

NPDES Compliance Inspection Report

Section A: National Data System Coding

				d'd
N MS0020303 99	0/03/23	. C	S	1 FEB
				J
Reserved Facility Evaluation Rating	ВІ	QA	Reserved	
3 .	,			~
	Section B:	Facility Data		
Name and Location of Facility Inspected			Entry Time:	Permit Effective Date:
HATTIESBURG - SOUTH WWTF			8:00 A.M. *	7/14/92
HATTIESBURG, MISSISSIPPI	•		Exit Time/Date:	1/17/02
			10:00 3/23/99	Permit Expiration Date:
			10:00 3/23/33	7/13/97
Name(s) of On-Site Representative(s)		Title(s)		Phone No(s)
MR. CHUCK HENDERSON		MANAGER, WATE	ER & SEWER DEPT.	545-4530
Name, Address of Responsible Official		Title		· ·
HON. J. ED MORGAN		MAYOR		
P O BOX 1898		Phone No.		Contacted .
HATTIESBURG MS 39403-1898		545-4501		YESNO_X_
Section C: Areas Evaluated D	uring Inspectio	on (S-Satisfactory, M-Mar	ginal, U-Unsatisfactory, N-Not Eva	aluated)
S Permit S Flow Meas	urement	<u> </u>	Pretreatment	<u>s</u>
Operations & Maintenance \underline{S} Records/Reports \underline{N} Laborator	rv	<u>и</u> с	Compliance Schedules	<u>N</u> Sludge
Disposal	1	_		
	Receiving W	Naters <u>S</u> S	Self-Monitoring Program	Other
<u> </u>				, , , , , , , , , , , , , , , , , , , ,
Section	on D: Summary of	f Findings/Comments		
		•		
•	,	•		
(SEE LETTER)				
			•	
			•	
•				
Names and Signatures of Inspectors	Agency/Office		•	Date
MICHAEL J. FREIMAN	DEQ/Offi	ice of Pollution	n Control	5/17/99
		*		3,1,,,,
		· · · · · · · · · · · · · · · · · · ·	,	
		•		
Signature of Reviewer	Agency/Office			Date
GLENN L. ODOM	DEQ/Offi	ice of Pollution	n Control	
	Regulatory	y Office Use Only	·	·
Action Taken	1	,	Date	
				Noncompliance
			1	Compliance

	e e e e e e e e e e e e e e e e e e e	
	•	
•		
· · · · · · · · · · · · · · · · · · ·		
· .		
•		
•		
	· · · · · · · · · · · · · · · · · · ·	

NPDES COMPLIANCE INSPECTION REPORT

•	Date:	3-23-90) Inspector: M. Fleiman	-
	•		
		PERMITTEE:	
	L	ATTIESBURG - SOUTA	
		141 1/63130100 - 200 1/1	:
		MAILING ADDRESS:	
			<i>,</i>
		BRIEF FACILITY DESCRIPTION:	
•		AERATED LALOON	
•			
	•		
		I. PERMIT CHECKLIST	- and the second
	NO N/A	1 Comment many and mailtime address of committee	
		1. Correct name and mailing address of permittee.	
YFA	NO N/A	2. Facility is as described in permit.	
(F)	NO N/A	 Notification has been given to EPA/State of new, different, increased discharges. 	
	EO. N/A	 Number and location of discharge points are as described in the permit. 	
(F)S	NO N/A	5. Name and location of receiving waters are correct.	
VIS	NO N/A	6. All discharges are permitted.	
YEs	NO N/A	7. All records required by permit are available for a three years.	minimum of

i	
•	
	· .
•	
	,
*	i ·
	•
	•
•	
•	
	•
•	
•	
	·
	•
•	I
	1
	· · · · · · · · · · · · · · · · · · ·
	1
	. 1
•	l
• .	1
	. 1
	,
	. 1
	1

II. SELF-MONITORING PROGRAM

A. General

YES NO N/A

1. Samples are taken at sites specified in permit.

WES NO N/A

2. Locations are adequate for representative samples.

YES NO N/A

3. Sampling and analysis completed on parameters specified by permit.

YES NO N/A

4. Sampling and analysis done in frequency specified by permit.

(ES) NO N/A

5. Permittee is using method of sample collection required by permit.

NO N/A

NO N/A

6. Sample collection procedures are adequate:

a. Samples refrigerated during compositing

b. Proper preservation techniques used

c. Containers and sample holding times before analyses conform with 40 CFR 136.3

YES NO N/A

7. Monitoring and analyses are performed more often then required by permit. If so, results reported in permittee's self-monitoring report.

ES NO N/A

8. Analytical results are consistent with the data reported on the DMR's.

9. Sampling and Analysis Data are adequate and include:

MO N/A

a. Dates, times, location of sampling

VES NO N/A

b. Name of individual performing samplingc. Analytical methods and techniques

ES NO N/A

d. Results of analysis

NO N/A

e. Dates of analysis

f. Name of person performing analysis

•	
	and the second of the second o
	•
; •	
1	
•	
•	
•	

Not Tested ON SITE B. BOD, Test Evaluation - No. 18 (Contract LAB)

	1. D.O. method used; a. Winkler Titration b. D.O. Probe c. Other
	2. If probe list calibration method; a. Air b. Saturated Water c. Winkler
YES NON	3. Holding time; < 48 hrs
YES NO OA	4. Preservation; 4 degree C
YES NO W	5. Incubation; 20 degree C
YES NO	6. Sample D.O. depletions; between 2 mg/1 and 6 mg/1
YES NO OA	7. Blank D.O. variation; < 0.2 mg/l
YES NO DA	8. If effluent is chlorinated: a. Sample dechlorinated. How? b. Sample seeded.
	C. Total Suspended Solids Test Evaluation - CONTINCT LAB
YES NO WA	1. Holding time; < 7 days
YES NO N	2. Oven temperature; 103 degree - 105 degree C
YES NO N	3. Balance Calibrated. Frequency?
YES NO N/	4. Balance Serviced at least yearly.
**	D. Ammonia Nitrogen Test Evaluation - Contract LAB
•,	1. Method used;
YES NO N/A	2. Holding time; < 28 days
YES NO N/A	3. Preservative; 4 degree C, H_2SO_4 to pH < 2
· ·	E. Fecal Coliform Test Evaluation
	1. Method used; a. MPN b. MF
•	c. Other

•	
-	
•	
•	
•	
•	
•	
•	
·	

YES NO (N/M	2. Holding time; < 6 hrs
YES NO (N)A	3. Preservative; Sterile container, 4 degree C
YES NO NA	4. 0.008% $Na_2S_2O_3^5$ added if sample chlorinated.
YES NO N/A	5. Water bath temperature; 44.5 degree C
	F. Dissolved Oxygen Test Evaluation
	1. Method used; a. Winkler Titration b. D.O Probe c. Other
•	2. Calibration (See B. BOD_5 Test Evaluation #2)
	G. pH Test Evaluation
YES NO N/A	1. EPA approved method used. If not, method used:
YES NO NA	2. Holding time; analyzed immediately
	H. Aeration Tank Settleability Test Evaluation
YES NO N/A	1. 1000 ml graduated cylinders used
YES NO N/A	2. Time of test; 30 minutes
•	I. Residual Chlorine Test Evaluation
YES NO N/A	1. EPA approved method used. If not, method used: Haut - Colonime 752
RES NO N/A	2. Holding time; analyzed immediately

•				
	· · · · · · · · · · · · · · · · · · ·			
	. :			
			·	٠
			1	
		· ;		
	•			

III. LABORATORY CHECKLIST

A. General

YES NO NA

1. Written laboratory quality assurance manual is available.

B. Laboratory Procedures - NoT EVECUATED

YES NO N/A

1. EPA approved analytical testing procedures are used.

YES NO NA

2. Standard Methods (lastest edition) is available.

YES NO NO

3. If alternate analytical procedures are used, proper approval has been obtained.

YES NO DA

4. Calibration and maintenance of instruments and equipment is satisfactory and records are adequate.

YES NO WA

5. Quality control procedures are used.

YES NO N/A

6. Commercial laboratory is used

Name BONNER ANALYTICAL
2703 OAK GROVE ROAD
Address HATTIESBURL MS 39402

Contact DR. Midlack BONNER

Phone 601-264-2854

C. Laboratory Facilities and Equipment - NoT

YES NO 🕡

1. Proper grade distilled water is available for specific analysis.

YES NO 1

2. Fume hood has enough ventilation capacity.

YES NO

3. The laboratory has sufficient lighting.

YES NO NA

4. Adequate electrical sources are available.

·	
	· ·
•	
•	
	•
·	
	•



5. Instruments/equipment are in good condition.

YES NO O

6. Written requirements for daily operation of instruments are available.

YES NO NO

7. Standards are available to perform daily check procedure.

YES NO WA

8. Written trouble-shooting procedures for instruments are available.

YES NO NO

9. Schedule for required maintenance exists.

YES NO DA

10. Working standards are frequently checked.

YES NO (N)

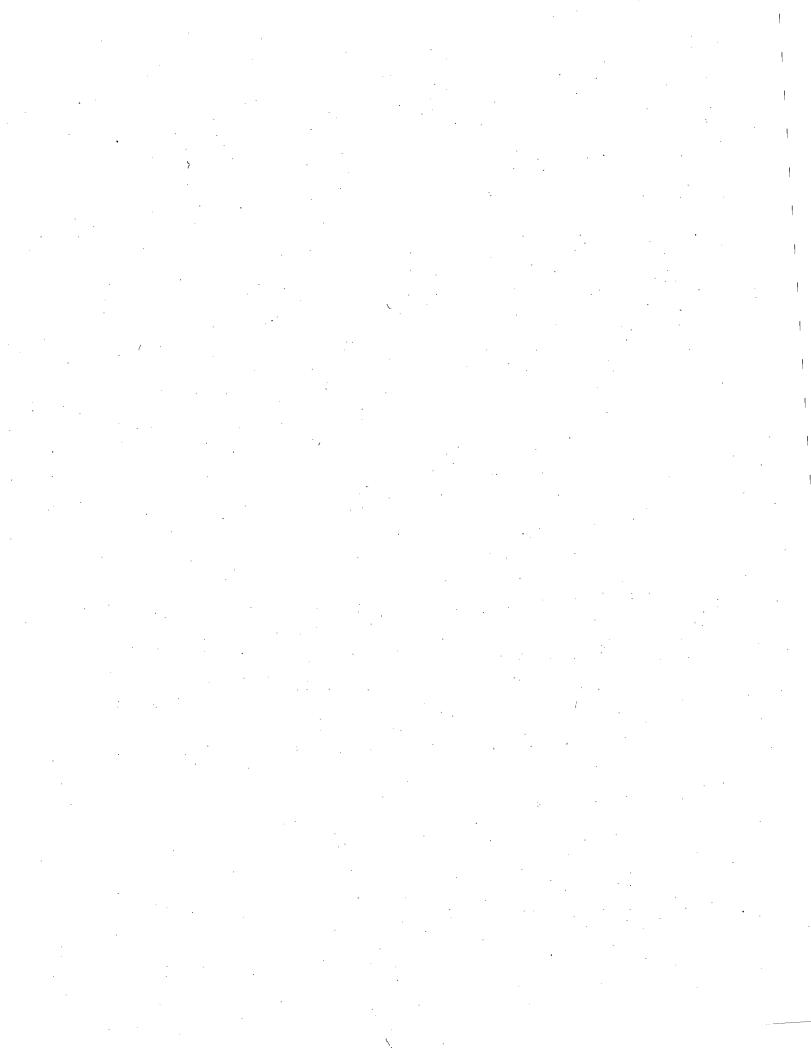
11. Standards are discarded after recommended shelf life has expired.

YES NO N

12. Background reagents and solvents run with every series of samples.



13. Written procedures exist for cleanup, hazard response methods, and applications of correction methods for reagents and solvents.



IV. FACILITY SITE REVIEW CHECKLIST

YES NO N/A	1. Standby power or other equivalent provision is provided. Pump Status ONLY
YES NO N/A	 Adequate alarm system for power or equipment failures is available.
YES NO N/A	3. All treatment units, other than back-up units, are in service.
WES NO N/A	4. Procedures for facility operation and maintenance \hat{j}_j exist.
YES NO N/A	 Organization plan (chart) for operation and maintenance is provided.
YES NO N/A	6. Operating schedules are established.
YES NO N/A	7. Emergency plan for treatment control is established.
<i>6</i> 2	8. Operating management control documents are current and include:
GS NO N/A	a. Operating report
S NO N/A	b. Work schedule
TS NO N/A	c. Activity report (time cards)
YES NO N/A	9. Adequate number of qualified operators are on-hand.
YES NO N/A	 Established procedures are available for training new operators.
YES NO N/A	 Adequate spare parts and supplies inventory and major equipment specifications are maintained.
YES NO N/A	12. Instruction files are kept for operation and maintenance of each item of major equipment.
YES NO WA	13. Regulatory agency was notified of by-passing. (Dates)
VES NO N/A	14. Hydraulic and/or organic overloads are experienced. Reasons for overloads
	MINOR Hydravlic during RAINFALL

	·
	• •
	•
χ_{-} .	



15. Dated tags show out of service equipment.



16. Routine and preventive maintenance are scheduled/performed on time.



a. O&M Manual

NO N/A

b. "As-built" engineering drawings

17. Plant Records are adequate and include:



c. Schedules and dates of equipment maintenance and repairs including cost.

d. Equipment supplies manual

e. Equipment data cards

				·			
		•		•			
			•				•
				· ·			
				•			
•	r					•	
• •							
i.e							
	•			•			
		•	•				
	÷						
		_				*	
•							
				•	•	•	
•				•			٠
	•	• .		•			
						•	
						•	
•			. 1				
		• • •		•			
						•	
•				•		•	
•							
						* *	
					(
						T _a	
·	•						
•				•			
	•	· .		•			
•							
	,	* •		•			
	•						
	. ,			V	•		
					. •	÷	
			*		•		
		. '		•			
					•		
•							
•	:						

v. sludge disposal ~//~

	1. Amount of Studge wasted daily from Clarifier:
•	a gallons/day b lbs/day (dry weight)
	b ibs/day (dif weight)
	Check the method(s) utilizing for sludge handling:
	a. aerobic digestion ()
•	b. anaerobid digestion ()
	c. filter press ()
	d. drying bed ()
	e. sludge lagoon ()
	f. other ()
	3. If sludge is hauled offsite for ultimate disposal, what
	is the quantity and frequency of hauling?
	a. Quantity: tons
	b. Frequency: () daily () monthly
	() weekly () annually
	c. Ultimate Disposal Site:
•	Name
•	Location
yes (no) n/a	4. If sludge is stored in an on-site lagoon or holding pond
	has it ever been dredged or otherwise cleaned out? If
	so, when and where was the sludge disposed? When:
	Where:
	nucto.



VI. FLOW MEASUREMENT CHECKLIST

A. General

YES NO N/A 1. Primary flow measuring device is properly installed and maintained.

ES NO N/A 2. Flow records are properly kept.

NO N/A 3. Sharp drops or increases in flow values are accounted for.

YES NO N/A 4. Actual flow discharged is measured.

YES(NO)N/A 5. Influent flow is measured before all return lines.

(YES)NO N/A 6. Effluent flow is measured after all return lines.

YES NO (7A)
7. Secondary instruments (totalizers, recorders, etc.) are properly operated and maintained.

YES NO (N/A) 8. Spare parts are stocked.

(YES) NO N/A 9. Flow monitoring records and charts are properly kept.

B. Flumes

YES NO N/A

1. Flow entering flume appears reasonable well distributed across the channel and free of turbulence, boils, or other-distortions.

NO N/A 2. Cross-sectional velocities at entrance are relatively uniform.

AFS NO N/A 3. Flume is clean and free of debris or deposits.

FS NO N/A 4. All dimensions of flume are accurate.

(E) NO N/A 5. Side walls of flume are vertical and smooth.

NO N/A 6. Sides of flume throat are vertical and parallel.

NO N/A 7. Flume head is being measured at proper location.

(E) NO N/A 8. Measurement of flume head is zeroed to flume crest.

EDS NO N/A 9. Flume is of proper size to measure range of existing flow.

YES NO N/A 10. Flume is operating under free-flow conditions over existing range of flows.

	•		
•			
·			
•	•		
	•		
	•		
	•		. •
•			
•			•
			•
			•
			•
1			
		•	
	•		•
•	•	•	
			•
			•
			•
	•		
•			
		· · · · · · · · · · · · · · · · · · ·	•
	·		
÷			·
		•	•
•			
			·
		}	
		•	
			•
	•		
· · · · · · · · · · · · · · · · · · ·	•	• • • • • • • • • • • • • • • • • • •	
	•		

C. Wiers

٠.	1. Type of weir used:
YES NO NA	2. The weir is exactly level.
yes no NA	The weir plate is plumb and its top edges are sharp and clean.
YES NO NA	4. There is free access for air below the nappe of the weir.
yes no (n) a	 Upstream channel of weir is straight for at least four times the depth of water level, and free from disturbing influences.
yes no (Nya	 The stilling basin of the weir is of sufficient size and clear of debris.
YES NO NA	7. Head measurements are properly made by facility personnel
YES NO TOYA	8. Proper flow tables are used by facility personnel.
	D. Flowmeter
	1. Type of flowmeter used: INSTARTANEOUS
	2. The most common problems experienced with the flowmeter:
	3. Measured Wastewater flow: mgd; Recorded flow: %
	4. Design flow: mgd.
YES NO (VA)	5. Flow totalizer is properly calibrated.
	6. Frequency of routine inspection by proper operator:/day.
	7. Frequency of maintenance inspections by plant personnel:/year.
	8. Frequency of flowmeter calibration:/month.
YES NO NA	9. Flowmeter adequate to handle expected ranges of flow rates.
YES NO 🕡	10. Venturi meter is properly installed and calibrated.
YES NO NA	11. Electromagnetic flowmeter is properly calibrated.



VIII. COMPLIANCE SCHEDULE STATUS REVIEW

YES NO N/A 1. The permit

1. The permittee has obtained necessary approvals to begin construction.

construction

YES NO N/A 2. Financing arrangements are complete.

(YES NO N/A 3. Contracts for engineering services have been executed.

YES NO N/A 4. Design plans and specifications have been completed.

YES NO N/A 5. Construction has begun.

YES NO N/A 6. Construction is on schedule.

YES NO N/A 7. Equipment acquisition is on schedule.

YES NO N/A 8. Construction has been completed.

YES (NO) N/A 9. Start-up has begun.

YES(NO)N/A 10. The permittee has requested an extension of time.

YES NO N/A 11. The permittee has met compliance schedule.

			,	•	
		•			
•	•				
			•		
			· :	•	
•					
			•	•	
	•				
			•	·	
		•			
			•		
		•			
	,	•			•
	•			•	
			•		
	•	·			
	•		·	÷	
•		•	•		
	• •		,	/	
•		•			
		•			
			•. •		
			•. •		
			•. •		
. •				• .	

a. Duel Pumps: Yee No b. Pumps Operable: Yee No b. Pumps Operable: Yee No b. Pafflee Adequates: Yee No comment: Yee No b. Pafflee Adequates: Yee No comment: Y	a. Dual Pumps: Yes No Pumps (perble: Yes No Pumps (perble: Yes No Pumps (perble: Yes No Comment: Yes No Comment: Yes No Cook: Yes No Cook:	ounty Person Contacted _	Phone No
Inspectors recommendations to person contacted: Verbal commitments of person contacted to correct problems:	Verbal commitments of person contacted to correct problems:	a. Dual Pumps: Yee No_ b. Pumps Operable: Yee No_ Comment: Aeration Cell a. Color:	a. Operating: b. Bafflee Adequate: c. Housing: d. Cylinders on Hand: How many? e. Solids in Contact chamber: f. Air gap in solution line: g. Chlorine Residual: Comment: VNICCOMMENT: 5. Effluent a. Color: b. Odor: c. Sample Taken: Comment: 6. General a. Fence: Locked: b. Upkeep: c. Access Road Condition: d. Safety Hazards: Comment: 7. Certified Operator Yes No Date departed:
		Verbal commitments of person contacted to correct problems:	•

•			•		•
				•	•
			•	· ·	
	••		•		•
	· · · · · · · · · · · · · · · · · · ·	a de la companya de l			
•	<u> </u>		. "		
•					
,		· -	· •		
		4	,	,	•
	•	•			
	• • • • • • • • • • • • • • • • • • • •	* .			*
				•	*
* *					
,		*			
	•	*			•
•					
* * *			*	•	***
					• ,•
•					•
	•				*
		•			,
		* * * * * * * * * * * * * * * * * * *			
	4			• • •	*
			1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -		
* * * * * * * * * * * * * * * * * * *		ر			•
•	•	44 J	•		* .
					•
	, »				•
				· · · · · · · · · · · · · · · · · · ·	•
				•	•
		*			
			A Committee of the Comm	. "	
•	, in the second of the second				
					•
*.	•	•			
u					,
		•			
•		, , , , , , , , , , , , , , , , , , ,		e + •	
í .		•			
					•
		· · · · · · · · · · · · · · · · · · ·			
			•		
			*		•
				*	
				,	
J.		•			
		*	,		
			•	•	
		•			
				·	
	•	•			
,			•		
	,	. 1			



MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

James I. Palmer, Jr., Executive Director

May 17, 1999

Mr. Chuck Henderson, Manager Water and Sewer Department City of Hattiesburg P. O. Box 1898 Hattiesburg, Mississippi 39403

Dear Mr. Henderson:

Re: NPDES Permit No. MS0020826 Hattiesburg North Facility Compliance Inspection (CEI/3560)

Enclosed is a copy of the compliance inspection report that was performed at the above referenced facility on March 23, 1999. The results of this inspection should be used by you as a guide for complying with requirements found in your NPDES permit.

If you have any questions concerning this matter, please contact us at (601)961-5271.

Sincerely,

Michael J. Freiman

Municipal Permit Compliance Branch

Enclosure

cc: SRO

Mr. Michael Hom, USEPA THIS COPY FOR

	•			*	
•			•		
	•		•		٠.
	,		v v	×	
	•	•	•		•
			,		
		· ·			
	•	•			
•					
	* A		•		
		•	•		
		١.	,	•	•
	i.		Î.		× .
	1		*		
			•	-	•
		· · · · · · · · · · · · · · · · · · ·			
		•	•	•	
	•			•	
· ·	•	·		• • •	·
·					-
			•		
					4
					•
•		· · · · · · · · · · · · · · · · · · ·			
		•			
					·
			•		
	•				•
			•		
					,
	*				
	<i>;</i>		. ;		
			•		



United States Environmental Protection Agency, ... Washington, D.C., 20460

Form Approved OMB No.2040-0003 Approval Expires 7-31-85

NPDES Compliance Inspection Report

		Section A:	National Data Sys	stem Coding		
Transaction Code	NPDES	YR/MO/DAY	· Ins	spection Type	Inspector	Facility Type Sche d'd
N ·	MS0020826	99/03/23	c		S	1 FEB
Reserved	Facility Evaluation Rating	j BI	QA	,	Reserved	
	3.	· N	· N			
		Section B:	: Facility Data			,
HATTIESBURG	of Facility Inspected G - NORTH WWTF G, MISSISSIPPI				Entry Time: 10:15 A.M.	Permit Effective Date:
HATTLESDONG	, M1331331111				Exit Time/Date: 12:00 3/23/99	Permit Expiration Date:
Name(s) of On-Site	e Representative(s) HENDERSON		Title(s) OPERATO	R		Phone No(s) 545-4531
Name, Address of Re	esponsible Official		Title MAYOR			
P O BOX 189 HATTIESBURG			Phone No. 545-450	1		Contacted YESNO_X_
	Section C: Areas Eval	uated During Inspecti	on (S-Satisfacto	ry, M-Marginal,	, U-Unsatisfactory, N-Not Eva	aluated)
S Permit Operations &	-	w Measurement		<u>N</u> Pretre	eatment	হ
<u>S</u> Records/Rep Disposal	ports <u>N</u> Labo	oratory		-	iance Schedules	<u>N</u> Sludge
<u>S</u> Facility Si	.te Review <u>S</u> Eff1	luent/Receiving	Waters	<u>S</u> Self-1	Monitoring Program	Other
A "						

Names and Signatures of Inspectors Agency/Office/Telephone Date MICHAEL J. FREIMAN Office of Pollution Control 5/17/99 Agency/Office GLENN L. OBOM Office of Pollution Control

. *	
•	,
•	
•	
	· · · · · · · · · · · · · · · · · · ·
· .	
	i
	•
	A control of the cont
•	
	•
•	

NPDES COMPLIANCE INSPECTION REPORT

•	Date: _	5-23-77 Inspector: M. FREIMAN	
-			• • •
÷		PERMITTEE:	
		HATTIESBURG- NONTH	
•		MAILING ADDRESS:	
	-	,	

,		BRIEF FACILITY DESCRIPTION:	
		AERATED LALOON	
ê	•		
			The state of the s
	-	I. PERMIT CHECKLIST	,
Æ.	NO N/A	1. Correct name and mailing address of permittee.	
0	NO N/A	2. Facility is as described in permit.	
	NO N/A	 Notification has been given to EPA/State of new, different, increased discharges. 	
O	10. N/A	 Number and location of discharge points are as described in the permit. 	
E	NO N/A	5. Name and location of receiving waters are correct.	
E s	NO N/A	6. All discharges are permitted.	•
	NO N/A	 All records required by permit are available for a r three years. 	ninimum of

	· }	
•		
		,
		•
,		,
		•
•		
•		
		•
		1
4	•	1
	•	1
		1
	<i>⁻</i> .	1
		1
		, ,
		1
		,
•		
		1
·	. •	1

II. SELF-MONITORING PROGRAM

A. General

NO N/A

1. Samples are taken at sites specified in permit.

A\N ON

2. Locations are adequate for representative samples.

NO N/A

3. Sampling and analysis completed on parameters specified by permit.

B NO N/A

4. Sampling and analysis done in frequency specified by

MES NO N/A

5. Permittee is using method of sample collection required by permit.

NO N/A NO N/A NO N/A

6. Sample collection procedures are adequate:

a. Samples refrigerated during compositing

b. Proper preservation techniques used

c. Containers and sample holding times before analyses conform with 40 CFR 136.3

ES NO N/A

7. Monitoring and analyses are performed more often then required by permit. If so, results reported in permittee's self-monitoring report.

YES NO N/A

8. Analytical results are consistent with the data reported on the DMR's.

9. Sampling and Analysis Data are adequate and include:

YES NO N/A NO N/A

a. Dates, times, location of sampling

NO N/A

b. Name of individual performing sampling

NO N/A

c. Analytical methods and techniques

NO N/A

d. Results of analysis

NO N/A

e. Dates of analysis

f. Name of person performing analysis

						•	
				•			
					•	· .	
•	·			:	4	•	
			•				
•					•		
•							, ,
€	•	1		ı		*	
			•				
			• '	,			
		•					
• ' .							
			•			* , * , * ,	•
	•			• '			
				•		,	
•							
	•					V	*
						* ' *	
			•		•		•
						,	
			•				
					,		ķ ·
4						. *	
					٠		
,							
×			• •				
		• • • • • •			. *		
	•	4 · · · · · · · · · · · · · · · · · · ·		* .			
•			·.			* .	
		•		•			
,	•	*			s .		•
	Ÿ.		*				•
,	,	•					•
		¥.				•	•
						-	
		* *					
	*				•		-
							•
				,	f.	•	
•						•	•
				* *			
	•	4			÷	**	
			•		8	,	
						, ,	
			•			•	
	.*			•		-	,
							•
					V		•
					•		i e
			•				-
	•	•					

			•	
• •	•			
• .	•		•	
	•	B. BOD ₅ Test Evaluation - Contract	LAB	
		1. D.O. method used; a. Winkler Titration		
		b. D.O. Probec. Other		
	f .	2. If probe list calibration method;		
		a. Air		
	* * * * * * * * * * * * * * * * * * * *	'b. Saturated Water c. Winkler		٠.
	YES NO WA	3. Holding time; < 48 hrs		
	YES NO (1)	4. Preservation; 4 degree C		
	YES NO (VA	5. Incubation; 20 degree C		
•	YES NO WA	6. Sample D.O. depletions; between 2 mg/1 and 6	mg/1	
	YES NO (N)A	7. Blank D.O. variation; < 0.2 mg/l		•
				9
	YES NO WA	8. If effluent is chlorinated: a. Sample dechlorinated. How?		
	YES NO (1)A	b. Sample seeded.		
	•	C. Total Suspended Solids Test Evaluation $-\mathcal{L}_{\mathcal{O}}$	ontine LAR	
	YES NO (M)A	1. Holding time; < 7 days	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	•
• •		AND THE RESIDENCE OF THE PARTY	a reasonate and a collection of the collection o	Middleson of the 1
	YES NO (1)A	2. Oven temperature; 103 degree - 105 degree C	•	. •
	YES NO (N)A	3. Balance Calibrated. Frequency?		
	YES NO (N)A	4. Balance Serviced at least yearly.		•
		D. Ammonia Nitrogen Test Evaluation - Cont	rout LAS	•
	(0	1 Method used;		
	YES NO NA	2. Holding time; < 28 days	· ·	
-	YES NO NA	3. Preservative; 4 degree C, H_2SO_4 to pH < 2		•
		E Foral Colifere Total Francisco		
		E. Fecal Coliform Test Evaluation		
		1. Method used; a. MPN b. MF		
		b. MF c. Other		•
		4		
	•			
	•		,	
	· ·			

					• .
					·
	,				
		•			
				· .	
					$\mathbf{v}_{i} = \mathbf{v}_{i}$
				· · · · · · · · · · · · · · · · · · ·	
		•			
			•		
		•			
•	•		•	•	•
•				•	
• .			•		
					••
					•
					•
		·			•
	•				
. • •					
	•				
					·
,					
				•	
	•			•	
		· .	``		
•		·			
	•		•		
,					
			•		,
	·	:			

YES NO (N)	2. Holding time; < 6 hrs
YES NO 🕅	3. Preservative; Sterile container, 4 degree C
yes no 👩a	4. 0.008% $Na_2S_2O_3^5$ added if sample chlorinated.
YES NO 🗞 A	5. Water bath temperature; 44.5 degree C
• •	
	F. Dissolved Oxygen Test Evaluation
	1. Method used; a. Winkler Titration b. D.O Probe c. Other
	C. Other
	2. Calibration (See B. BOD ₅ Test Evaluation #2)
_	G. pH Test Evaluation
YES NO (17)A	1. EPA approved method used. If not, method used:
yes no MA	2. Holding time; analyzed immediately
r	H. Aeration Tank Settleability Test Evaluation
YES. NO 🕖	1. 1000 ml graduated cylinders used
YES NO 1673	2. Time of test; 30 minutes
· .	I. Residual Chlorine Test Evaluation
TES NO N/A	1. EPA approved method used. If not, method used: HACH - CoLon meter
S NO N/A	2. Holding time; analyzed immediately

	. '
•	
	4
	· · · · · · · · · · · · · · · · · · ·

III. LABORATORY CHECKLIST

A. General

YES NO NA

1. Written laboratory quality assurance manual is available.

B. Laboratory Procedures - NOT EVALUATED (Contract LAB)

YES NO

1. EPA approved analytical testing procedures are used.

YES NO NA

2. Standard Methods (lastest edition) is available.

YES NO

3. If alternate analytical procedures are used, proper approval has been obtained.

YES NO NO

4. Calibration and maintenance of instruments and equipment is satisfactory and records are adequate.

YES NO NO

5. Quality control procedures are used.

YES NO N/A

6. Commercial laboratory is used

Name BONNER ANALYTICAL
2703 OAK GROJE ROAD
Address HATTIESBOAL MS 39402

Contact DR. MILLIAGE BONDER

Phone 601-264-2854

C. Laboratory Facilities and Equipment

YES NO D

1. Proper grade distilled water is available for specific analysis.

YES NO

2. Fume hood has enough ventilation capacity.

YES NO MA

3. The laboratory has sufficient lighting.

YES NO (V)

4. Adequate electrical sources are available.

						4.5
				•		
	•			•	,	
	•	•	•			
			\			
			•			• .
	•			•		,
	·			•		
					·	
					,	
				•		
. •			•			
•	•			e e e e e e e e e e e e e e e e e e e		
		•				
					•	
•					•	
7 •			•			
		· .				
				•	,	
		•			•	•
	•	,				
		•				
,					•	
		•				
				/		• .
		•			•	
		•				
•						
,						
				. •		
					·	
·		•				
	·	e.				
		,				
•						1
						•



5. Instruments/equipment are in good condition.

YES NO

6. Written requirements for daily operation of instruments are available.

YES NO

7. Standards are available to perform daily check procedure.

YES NO KOA

8. Written trouble-shooting procedures for instruments are available.

YES NO NO

9. Schedule for required maintenance exists.

YES NO OA

10. Working standards are frequently checked.

YES NO 🕼

11. Standards are discarded after recommended shelf life has expired.

YES NO WA

12. Background reagents and solvents run with every series of samples.

YES NO N

13. Written procedures exist for cleanup, hazard response methods, and applications of correction methods for reagents and solvents.



IV. FACILITY SITE REVIEW CHECKLIST

(E)	NO	N/A	 Standby power or other equivalent provision is provided.
Æ:	NO	N/A	Adequate alarm system for power or equipment failures is available.
E	NO	N/A	3. All treatment units, other than back-up units, are in service.
(F)S	NO	Ň\V	4. Procedures for facility operation and maintenance \hat{j} exist.
E	NO	N/A	 Organization plan (chart) for operation and maintenance is provided.
Es	NO	N/A	6. Operating schedules are established.
E	NO	N/A	7. Emergency plan for treatment control is established.
			Operating management control documents are current and include:
O s			a. Operating report
		N/A N/A	b. Work schedulec. Activity report (time cards)
G.		1,17 2.	• notivity report (time cards)
E S	ИÓ	N/A	9. Adequate number of qualified operators are on-hand.
æ	NO	N/A	 Established procedures are available for training new operators.
O s	NO	N/A	 Adequate spare parts and supplies inventory and major equipment specifications are maintained.
Œ	NO	N/A	12. Instruction files are kept for operation and maintenance of each item of major equipment.
YES	NO	Ø ^A	13. Regulatory agency was notified of by-passing. (Dates)
YES	NO	N/A	14. Hydraulic and/or organic overloads are experienced. Reasons for overloads
			Hydraulic + Organic - GROWTH IN
			AREA AND RAINFALL

						•
	•				•	
•					·	
						•
					•	
				•		
			``.		·	
				•		
	·			;		,
_			•			
						•
			·			1
				•		•
			ć.			
		•				
				•	•	
					•	•
			•	,		
				·		
		•				
•		·				
				•		•
•	•			•		•
		•				
•						·
•	:					
			•			
· ·						
	•				•	
					•	•
						,
•						
		1			••	
		•	•			•
				•		
					•	
			:		•	
		•		•		·
	1			•		
e, e						

YES NO N/A

15. Dated tags show out of service equipment.

(YES NO N/A

16. Routine and preventive maintenance are scheduled/performed on time.

17. Plant Records are adequate and include:

a. O&M Manual

b. "As-built" engineering drawings

c. Schedules and dates of equipment maintenance and repairs including cost.

d. Equipment supplies manual

e. Equipment data cards

ATES NO N/A

ES NO N/A

NO N/A

TES NO N/A



v. SLUDGE DISPOSAL

· ·	1. Amount of sludge wasted daily from clarifier:
	a gallons/day b lbs/day (dry weight)
	<pre>2. Check the method(s) utilizing for sludge handling: a. aerobic digestion () b. anaerobid digestion () c. filter press () d. drying bed ()</pre>
	e. sludge lagoon () f. other ()
	3. If sludge is hauled offsite for ultimate disposal, what is the quantity and freguency of hauling? a. Quantity: tons
	b. Frequency: () daily () monthly () weekly () annually
e e e	c. Ultimate Disposal Site: Name
	Location
yes 😡 n/a	4. If sludge is stored in an on-site lagoon or holding pond, has it ever been dredged or otherwise cleaned out? If
	so, when and where was the sludge disposed? When:
	Where:

.e.			•			
	\(\frac{1}{2}\)					
						•
	·.	· .				
		,				
		,				
					•	
	•					
				•		
			•			
					4	
				•		

VI. FLOW MEASUREMENT CHECKLIST

A. General

S NO N/A

1. Primary flow measuring device is properly installed and maintained.

S NO N/A

2. Flow records are properly kept.

PS NO N/A

3. Sharp drops or increases in flow values are accounted for.

(FES NO N/A

4. Actual flow discharged is measured.

YES (N) N/A

5. Influent flow is measured before all return lines.

MES NO N/A

6. Effluent flow is measured after all return lines.

YES NO M

7. Secondary instruments (totalizers, recorders, etc.) are properly operated and maintained.

YES NO 🕥

8. Spare parts are stocked.

YES NO N/A

9. Flow monitoring records and charts are properly kept.

B. Flumes

YES NO

1. Flow entering flume appears reasonable well distributed across the channel and free of turbulence, boils, or other distortions.

YES NO MA

2. Cross-sectional velocities at entrance are relatively uniform.

YES NO MA

3. Flume is clean and free of debris or deposits.

YES NO (1)

4. All dimensions of flume are accurate.

YES NO

5. Side walls of flume are vertical and smooth.

YES NO

6. Sides of flume throat are vertical and parallel.

YES NO (1)

7. Flume head is being measured at proper location.

YES NO

8. Measurement of flume head is zeroed to flume crest.

YES NO NA

9. Flume is of proper size to measure range of existing flow.

YES NO N

10. Flume is operating under free-flow conditions over existing range of flows.

			·				
	•						
	•						
				•			
						٠	•
	•						
			•				
		,			,	. 4	
					•		
•		•	•				
			•				
			÷		•		
	•						
			•		•		
	e1						
•						•	
	•				*. •.		
	3						2
		•					
		•			•		
							,
				÷			
						: .	\$. ·
•						•	
						-	
				•	•		
,				•			
			•	•			
		•			,		
			•				
			•				
							•
•	· · · · · · · · · · · · · · · · · · ·	•					•
•				•			
	·		•				•
	. •						
		•					
	1						
		· •			•		F
	,						-
}	•	<i>:</i>				,	
		•					
·			•				
				, ,			
			•				
				٠	• .		

C. Wiers

			1. Type of weir used: Ratangular
Œ	NO	N/A	2. The weir is exactly level.
(FS	NO	N/A	The weir plate is plumb and its top edges are sharp and clean.
E s	NO	N/A	4. There is free access for air below the nappe of the weir.
(YPs	NO	N/A	 Upstream channel of weir is straight for at least four times the depth of water level, and free from disturbing influences.
(E)S	NO	N/A	 The stilling basin of the weir is of sufficient size and clear of debris.
E s	NO	N/A	7. Head measurements are properly made by facility personnel.
F S	NO	N/A	8. Proper flow tables are used by facility personnel.
			D. Flowmeter
			1. Type of flowmeter used: -N/A - INSTANTANEOUS
*			2. The most common problems experienced with the flowmeter:
		-	
e desire en		•	3. Measured Wastewater flow:mgd; Recorded flow:mgd; Error %
YES	ио (mgd; Error %
YES	мо ((I)	mgd; Error % 4. Design flow: mgd.
YES	ΝΟ (()	mgd; Error % 4. Design flow: mgd. 5. Flow totalizer is properly calibrated. 6. Frequency of routine inspection by proper operator:
YES	NO (O	mgd; Error % 4. Design flow: mgd. 5. Flow totalizer is properly calibrated. 6. Frequency of routine inspection by proper operator: /day. 7. Frequency of maintenance inspections by plant personnel:
YES	,		mgd; Error % 4. Design flow: mgd. 5. Flow totalizer is properly calibrated. 6. Frequency of routine inspection by proper operator: /day. 7. Frequency of maintenance inspections by plant personnel: /year.
	NO (6 0 0 1	mgd; Error % 4. Design flow: mgd. 5. Flow totalizer is properly calibrated. 6. Frequency of routine inspection by proper operator: /day. 7. Frequency of maintenance inspections by plant personnel: /year. 8. Frequency of flowmeter calibration: /month. 9. Flowmeter adequate to handle expected ranges of flow

•	
•	
	n de la companya de
, ,	
No. No.	

VIII. COMPLIANCE SCHEDULE STATUS REVIEW.

YES NO 1. The permittee has obtained necessary approvals to begin construction.

YES NO (A) A 2. Financing arrangements are complete.

YES NO (N)A 3. Contracts for engineering services have been executed.

YES NO (T)A 4. Design plans and specifications have been completed.

YES NO 10 5. Construction has begun.

YES NO (1)A 6. Construction is on schedule.

YES NO (A) 7. Equipment acquisition is on schedule.

YES NO N/A 8. Construction has been completed.

YES NO NA 9. Start-up has begun.

YES NO NA 10. The permittee has requested an extension of time.

YES NO 11. The permittee has met compliance schedule.

				•
•	•			
•			*.	
			*	
			•	
				•
		•	•	
		·		
	, ,			
	•			
		· .		
		•		
	•		•	
		•		
	•	•		
·				
			•	
		•		
÷				
· .				
				,
	·	•		
	•		•	
•				÷

		I INSPECTION REPORT NP	
Name of Facility (Mun., Ir	d., Private)	HATTIESBURG -NORTH	
ounty Person	Contacted	Phone No	
Pumping station a. Dual Pumps: b. Pumps Operable: Comment:		4. Chlorinator and Contact Chamber a. Operating: b. Baffles Adequate: c. Housing:	Yes No_ Yes No_ Yes No_ Yes No_
Aeration Cell a. Color:		d. Cylinders on Hend: How many? e. Solids in Contact chamber: f. Air gap in solution line: g. Chlorine Residual: Comment: WATCR LINE COT 5. Effluent a. Color: b. Odor: c. Sample Taken: Comment:	Yes No
f. Aerators: 9 / CELC Number Operable: Yes No Yes		c. Access Road Condition: d. Safety Nazards: Comment: 7. Certified Operator Yes: \(\) No Date depart	
f. Dikes: Condition: Good Poor Freeboard: /2 Ft Grass: Coff Comment: Dike Canasian		Mame: Cert. No.: Class: Exp	res:
Inspectors recommendations to person con	tacted:		
Verbal commitments of person contacted to	o correct problems:		
	,		
Does this situation warrant action from the section from the section scheduled:	the Jackson office:	Yes No Yes Date Inspector: M.FREIM Date:	No ^_∕

;

			*			· · ·	
	•				· · · · · · · · · · · · · · · · · · ·		
		•					1
							İ
	•					,	: '
				٠.			1
	: '		,				
				•			
					:		1
		•					
				•			
				٠	, .		1
	,						,
			•				
							•
				v.		•	
			•				
				•			
•							
	;			•		•	
•			•	•	,	· .	
			•	•			
		· .					
•							
					. •	,	•
					•		
			•		,	•	
		•	•				•
•							
	' .			,			
		•		: .			
				· .		•	
							·
			·	,			



MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

James I. Palmer, Jr., Executive Director

August 6, 1999

Mr. Chuck Henderson, Manager Water and Sewer Department City of Hattiesburg P. O. Box 1898 Hattiesburg, Mississippi 39403

Dear Mr. Henderson:

NPDES Permit No. MS0020303 Re: Hattiesburg South Facility Compliance Inspection (CMI)

Enclosed is a copy of the compliance inspection report and sampling results that were taken at the above referenced facility on February 2, 1999.

The results of this inspection should be used by you as a guide for complying with requirements found in your NPDES permit.

If you have any questions concerning this matter, please contact us at (601)961-5271.

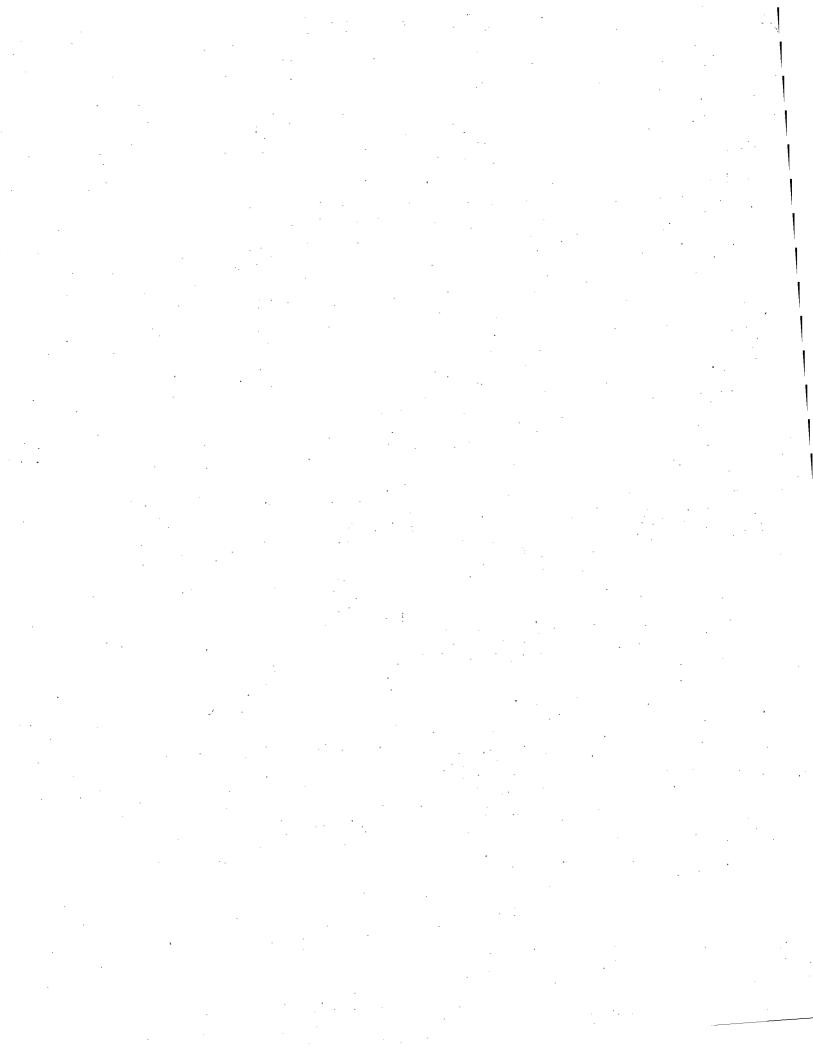
Sincerely

Michael J. Freiman

Municipal Permit Compliance Branch

Enclosure

cc: Mr. Michael Hom, USEPA THIS COPY FOR



Sch	ed; led Feb. 1999 AERATED LAGOON	INSPECTION REPORT	NPDES NO20303
 Nom	e of Facility (Mun., Ind., Private) Hat	rtiesburg South Lageon	
	nty Forrest Person Contacted		Phone No. 545-4531
			_ 1oeo
1.		4.Chlorinator and C	
	a. Dual Pumps: Yes X No		Yes No_X_
	b. Pumps Operable: Yes_X_No	a. Operating:	
	Comment: Main pump just put back on	b. Baffles adequa	
_	line after severe weather.	c. Housing:	Yes No
2.		d. Cylinder on ha	
	a. Color: Green b. Odor: Yes No X	How many:	
	b. Odor: Yes No_X c. Floating solids:None_X Few Many		act chamber: Yes No
	d. Effluent structure condition:		ution line:Yes No dual:Mg/l YesNo
	Good X Poor		nation system being
	e. Dikes:	instal	
	Condition: Good	5.Effluent:	acc.
	Freeboard: 10-15 FT.		Turbid X Clear
	Grass: O.K.	b. Odor:	Yes No_X
	f. Aerators:	c. Sample taken:	Yes X No
	Number: 72		transparent green
•	Operable: Yes No_X		amples: BOD-SS, fecal
	Timed: Yes No X	6.General:	-
-	Comment: Switched off at time of	a. Fence:	Yes X No
٠.	inspection & sampling (see comments).	Locked:	Yes <u>X</u> No
3.	Settling Cell:	b. Upkeep:	Good <u>X</u> Poor
	a. Color: Green		ndition:Good X Poor
	b. Odor: Yes No_X	d. Safety hazards	Yes No_X_
	c. Floating solids:None_X Few Many	Comment: None	
	d. Skimming: Yes X No	i,	
	e. Effluent structure condition:	Certified Operat	
	Good_X_ Poor		e departed
	f. Dikes:	Name: Chuck He	
	Condition: Good	Cert. No.: 3033 Cla	ss: <u>III Exp: 10-1-99 </u>
	Freeboard: 10-15 FT.		
	Grass: O.K.		•
	Comment: *	•	.~ ,
		•	
8.	Inspectors recommendations to person con	tacted: As planned re	store seration units
٠.	to normal operation.	The contract of the contract o	Store derector direct
•	to normal operation.		* ,
9.	Verbal commitments of person contacted t	o correct problems:	Will comply.
•	The second of th		
10.	General comments: About 12 aerators ou	t of service, five of w	hich flipped over
	during recent severe weather on 1-30-99.		
	until new switchboard installed.		
	*High flow after heavy rain allowing som	e overflow over skimmer	on north outfall
,	structure.		
		· .	
11.	Does this situation warrant action from	the Jackson Office:	Yes No_X
12.	Follow-up inspection scheduled:	Y	es ^ Date No X
		-	
*		Inspect	or: Mike Egan
		Date: 2-2-00	Time: 10:45 a m

.

				2	1
					1
·			•	•	1
					. '
				•	
	,				1
					. 1
					1
	•				
				+1 *	
· ·	•				1
			•		1
					!
			•		1
		•	•		. 1
			ė.		
	:			•	1
		•			· · · · · · · · · · · · · · · · · · ·
	•	•			
•		* * * * * * * * * * * * * * * * * * *			
•			¥		•
•		· · · · · ·		•	
		•			
		•			. • •
•	•				
			•		
•		4.5			
	,				
				•	
				*. ,	
		•			
•					
	. · · ·	C			
					•
			•		
	· · · · · · · · · · · · · · · · · · ·			1 *	•
				•	•
				į.	•
				•	
	•				•
		•	•		
		•			
	· .				
		•			
·					

BUREAU OF PULLUTION CONTROL SAMPLE REQUEST FORM

Lab Bench No.: 0397 Cost Code: 3700

I. **GENERAL INFORMATION:**

Facility Name: Hattiesburg Aerated Lagoon

County Code: 0800

Discharge No: 001 Date Requested:

Sample Point Identification:

Data To: M. Freiman

Other:

Time: 1030

NPDES Permit No.: 20826

Type of Sample: Grab: X Composite: Flow: Time: Other:

II. **SAMPLE IDENTIFICATION:**

> **Environment Condition: Good** Collected By: M. Egan

Where Taken: Final outfall structure near Bowie River

	Type	Parameters	Preservative	Date	Time
1.	Grab	BOD,SS	Cool	2-2-99	1155
2.	Grab	Fecal	Cool	2-2-99	1155
3.					
4.					
5.					
6.	,			,	

Ш. FIELD:

Analysis	Computer	r Rec	-	Analyst	Date
pH	000400	X	7.1	. ME	2-2-99
D.O.	000300				
Temperature	000010				
ResidualChlorine	050060	X	0.27	ME	2-2-99
Flow	074060	X	1.94 MGD	ME	2-2-99

IV. TRANSPORTATION OF SAMPLE:

> Bus: X **RO Vehicle:**

V. LABORATORY:

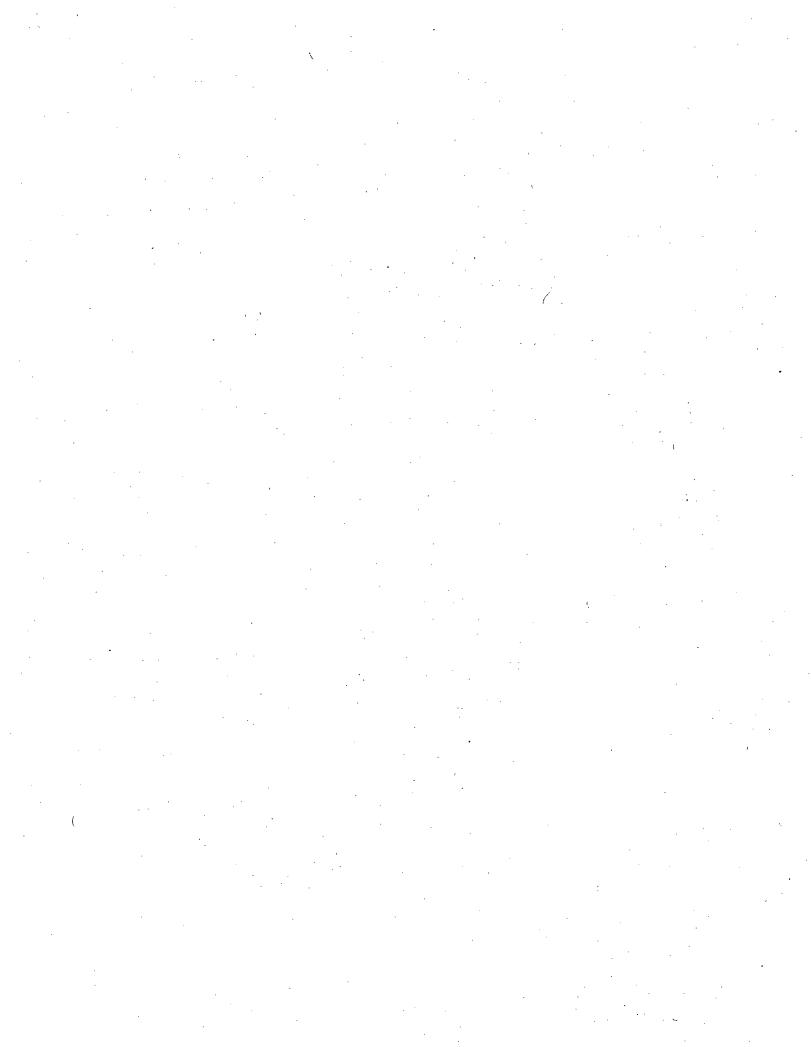
Received by: Otis Clark

Recorded by: T. Sawyer

Date Sent to State Office: 2-24-99

Date: 2-3-99

Remarks:



TARGET COMPOUND LIST WET CHEMISTRY PARAMETERS

Lab Bench No.: 0397

Analysis	Computer Code	Req	Result		Analyst	Date Measured or Date Test Initiated
BOD	000310	X	11.0	mg/l	VS	2-4-99
COD	000340			mg/l		
TOC	000680		·	mg/l		
Suspended Solids	099000	X	25.0	mg/l	VS	2-4-99
TKN	000625			mg/l	,	
Ammonia-N	000610			mg/l		
Fecal Coliform	074055	X	800 colonies	/100ml	MJ	2-5-99
Total Phosphorous	000665			mg/l		·
Oil & Grease	000550			mg/l		
Chlorides	099016			mg/l		•
Phenol	032730			mg/l		
Cyanide	000722			mg/l		;
Nitrate-Nitrite	000630			mg/l		,
Alkalinity	000410			mg/l		
Hardness	000900			mg/l	,	
		1				,

	•						
•		•					
					· ·	•	
	· :		t		•		
		•		•			
		•					
				•	•		
		•					
	•						
		٠.	. •		*	er ·	
						•	
•			,		. '		•
			• •	•			
	•	•		* %			
•							
				•			
						•	
•		•				•	
•		•				•	
	•						
· .							
		,					
		*.		. •	•		
						,	
•							
•							
		:	•				
	•	΄,					
	*		,				
					,		
			•		• .		
				* .		•	
		•	· .				
				•		•	
					/		
• .					*		
			• '			*	
							.`
•			-				
							** ·
			÷	,			
•							
	,			· · ·			
		•		•			
	_		•			•	
		*	1			,	

BUREAU OF POLLUTION CONTROL SAMPLE REQUEST FORM

Lab Bench No.: 0395 Cost Code: 3700

I. GENERAL INFORMATION:

Facility Name: Hattiesburg Aerated Lagoon

County Code: 0800 NPDES Permit No.: 20303

Discharge No: 002 Date Requested:

Sample Point Identification: Effluent - South discharge

Requested By: Compliance Monitor Data To: M. Freiman

Type of Sample: Grab: X Composite: Flow: Time: Other:

II. SAMPLE IDENTIFICATION:

Environment Condition: Good Collected By: M. Egan

Where Taken: Oulfall structure of lagoon

٠,	Туре	Parameters	Preservative	Date	Time
1.	Grab	BOD,SS	Cool	2-2-99	1145
2.	Grab	Fecal	Cool	2-2-99	.1145
3.			· ·	· .	
4.					
5.					
6.					

III. FIELD:

Analysis	Computer	r Re Code	-	· Aı	nalyst	Date
рН	000400	X	7.24		ME	2-2-99
D.O.	000300				,	
Temperature :	000010				,	
ResidualChlorine	050060	·				
Flow	074060	X	7.24 MGD		ME	2-2-99

IV. TRANSPORTATION OF SAMPLE:

Bus: X RO Vehicle: Other:

V. LABORATORY:

Received by: Otis Clark Date: 2-3-99 Time: 1030

Recorded by: T. Sawyer Date Sent to State Office: 2-24-99

Remarks: Flow taken by inserting measuring stick in pvc pipe that connects to underground parshall flume channell

	•
• .	
	l l
,	
•	$A_{ij} = A_{ij} + A$
	$\mathcal{L}_{\mathcal{L}}}}}}}}}}$
	•
	· · · · · · · · · · · · · · · · · · ·

TARGET COMPOUND LIST WET CHEMISTRY PARAMETERS

Lab Bench No.: 0395

Analysis	Computer Code	Req	Result		Analyst	Date Measured or Date Test Initiated
BOD	000310	X	9.0 mg	<u>/</u> l	VS	2-4-99
COD	000340		mg	<u>;/l</u>		
тос	000680		mg	<u>;/l</u>	·	
Suspended Solids	099000	X	7.0 mg	ç/l	vs	2-4-99
TKN	000625		mg	<u>;/l</u>		
Ammonia-N	000610		mg	;/ 1		
Fecal Coliform	074055	X	170 colonies/100n	nl	MJ	2-5-99
Total Phosphorous	000665	,	mg	:/1		
Oil & Grease	000550		mg	<u>/</u> 1		
Chlorides	099016		mg	/1		
Phenol	.032730		mg	/1		
Cyanide	000722		mg	/1		
Nitrate-Nitrite	000630		mg	/1		
Alkalinity	000410		mg	/1		
Hardness	000900		mg	/1		
				-		

					•	1	
			•			1	
		2				1	
	•					. 1	
		,				1	
		· · · · · · · · · · · · · · · · · · ·			· .	1	
						1	
				•			
	•	•				. 1	
						1	
		· ·					
			•		•	1	
•			;			. 1	
						1	
						1	
							1
				, .	*	·	1
	•				;		1
			•	·	•		ì
				•		•	1
		•					1
<u>_</u>							1
		**		•	,		1
,		:					
			,				
			•	• • • • • • • • • • • • • • • • • • • •			
		•		,			
		,					
				•			
		,				•	
		•		,	· · · .	•	
•		, in the second of the second		•		,	
					•		
			• • •	•			
•	2		V		•		
							,
				•			
	•						
·							,
	٠ ,						٠.
			· · · · · · · ·				
	•	•					
					•		
					•		
		,					
					•		
	•	,					
			•				
	•						



MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

James I. Palmer, Jr., Executive Director

August 5, 1999

Mr. Chuck Henderson, Manager Water and Sewer Department City of Hattiesburg P. O. Box 1898 Hattiesburg, Mississippi 39403

Dear Mr. Henderson:

NPDES Permit No. MS0020826 Re: Hattiesburg North Facility Compliance Inspection (CMI)

Enclosed is a copy of the compliance inspection report and sampling that was performed at the above referenced facility on February 2, 1999. The results of this inspection should be used by you as a guide for complying with requirements found in your NPDES permit.

If you have any questions concerning this matter, please contact us at (601) 961-5271.

Sincerely,

Michael J. Freiman

Municipal Permit Compliance Branch

Enclosure cc: SRO

Mr. Michael Hom, USEPA THIS COPY FOR

•		•					•	
		•						
	•			•				•
	•							
		4						
						• • •		
						•		
	*							•
			•					•
							•	,
								:
					<u>;</u> :	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -		
	•							
				•		•		
			•					
		•						
	•							•
				4	•	^		
	:							•
					*	•		
			4	. • •				
				•				
								•
				• "	•		•	
	1		•			**		
				•		. •		
				;		•	•	
	,		•			•		
					•			
	,		•	•		•		
			•				٠.	
							ì	•
						•	,	
	•	•		* *			Þ	
				i.				
		•				•		•
	•	•		,				
•				•				
•			•	. :				
				. •	•			
			•					
	•							
							٠	
	•		•	•				
								•
	•	• • • •						

ounty Forrest Person Contacted	Leroy Scott	Phone No. 545-453]
		· ·
Pumping Station: Yes X No	4.Chlorinator and	Contact Chamber:
a. Dual Pumps: Yes_X_No	•	Yes <u>X</u> No
b. Pumps Operable: Yes X No	<pre>a. Operating:</pre>	Yes X No
Comment: None		uate: Yes X No
	c. Housing:	
Aeration Cell:		hand: Yes X No
a. Color: Dark gray		2 on line, 4 spare
b. Odor: Yes X No	e Solids in co	ntact chamber: Yes X No
c. Floating solids:None Few_X Many		olution line:Yes X No
d. Effluent structure condition:		ual: 0.27 Mg/l Yes X No
Good X Poor	Comment: None	
e. Dikes:	Commenc. None	
Condition: Good	5 DE61	•
	5.Effluent:	
Freeboard: 12 FT.	a. Color:	
Grass: O.K.	b. Odor: (Sligh	ht) Yes <u>X</u> No_
f. Aerators:		Yes X No
Number: 18		collected: BOD-SS, feca
Operable: Yes No_X_	- : ;	ion of river at dischar
Timed: YesNo_X_	point.	· ·
Comment: Two of 18 aerators out of		•
rvice; one pulled and in shop for repair	6.General:	
Settling Cell:	a. Fence:	Yes <u>X</u> No_
a. Color: Dark green	Locked:	
b. Odor: Yes No X	b. Upkeep:	Good X Poor
c. Floating solids:None Few_X Many	c. Access road o	condition:Good X Poor
d. Skimming: Yes X No		ds: Yes No_
e. Effluent structure condition:	Comment: None	
Good X Poor		
f. Dikes:	7. Certified Opera	ator:
ondition: Fair - some erosion of banks	Yes X No Da	ate departed
Freeboard: 10-12 FT.	Name: Chuck I	
Grass: O.K.		lass:III_Exp: 10-1-99
	Cerc. No.: <u>3033</u> C.	Lass. 111 Exp. 10-1-55
Comment: None		
•		
Torrestana magamandations to norgan conti	natadi Nana	· · · · · · · · · · · · · · · · · · ·
Inspectors recommendations to person conta	acted: None	
Verbal commitments of person contacted to	gorrost problems:	NI/A
verbal commitments of person contacted to	correct problems	N/A
. General comments: None	•	

,		
. Does this situation warrant action from the		YesNo_
, bood dire dreaded nations action from th	Juonoga Viiioga	•
•		** ** ** *** *** *** *** *** *** *** *
. Follow-up inspection scheduled:		Yes Date No_
. Follow-up inspection scheduled:		res Date No.

Date: 2-2-99

Time: 11:15 a.m

	1							
			,					
	\$ ->					•		
×								
•				•			•	
	•	4					•	
•								
•				•		•		
		**					•	
		•					\$.	
		•			<i>t</i> .	•	•	
•		. *						
	4	· ·		* *		•		
							4	
		v.					•	
						× •		
						•	•	
				•				
•					•			
					•			
				•	•			
			•				•	
•					•		•	
,	•	•						
	•							
· *								
	-					2		
	- 					•		
					•			
	4			•		*	·	
					,			
					ŕ	•		
		-			•			
w.**			*	•				
						•		
						•		
			,					
•								
, i	•	•			1 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		200	
•					• "			
		,		,			•	
•			,					
		•		4				
.*						•		
		•						
		•						
,		· · · · · · · · · · · · · · · · · · ·			-			
					i v			
		·		٠		.*		
	-					•		
•				•	,	•		

BUREAU OF POLLUTION CONTROL SAMPLE REQUEST FORM

Lab Bench No.: 0396 Cost Code: 3700

NPDES Permit No.: 20303

I. GENERAL INFORMATION:

Facility Name: Hattiesburg Aerated Lagoon

County Code: 0800

Discharge No: 001 Date Requested:

Sample Point Identification: Effluent - North discharge

Requested By: Compliance Monitoring Data To: M. Freiman

Type of Sample: Grab: X Composite: Flow: Time: Other:

II. SAMPLE IDENTIFICATION:

Environment Condition: Good Collected By: M. Egan

Where Taken: Effluent structure at Lagoon

•	Type	Parameters	Preservative	Date	Time
1.	Grab	BOD,SS	Cool	2-2-99	1155
2.	Grab	Fecal	Cool	2-2-99	1155
3.					
4.				·	
5.	·				
6.	,		·		

III. FIELD:

Analysis	Computer (r Rec	q Results	Analyst	Date
рН	000400	X	7.5	ME	2-2-99
D.O.	000300				
Temperature	000010			,	
ResidualChlorine	050060				
Flow	074060	X	4.39 MGD	ME	2-2-99

IV. TRANSPORTATION OF SAMPLE:

Bus: X RO Vehicle: Other:

V. LABORATORY:

Received by: Otis Clark Date: 2-3-99 Time: 1030

Recorded by: T. Sawyer Date Sent to State Office: 2-24-99

Remarks:

		•		·
			•	· ·
		•		
		. ,		
•				
, ·				
		•		
		· · · · · · · · · · · · · · · · · · ·		
		• .	•	
	•	* * * * * * * * * * * * * * * * * * *	•	
		•		,
	•	·		
•				•
		· ·		
	· ·			
	· ·			

TARGET COMPOUND LIST WET CHEMISTRY PARAMETERS

Lab Bench No.: 0396

Analysis	Computer l	Req	Result		Analyst	Date Measured or Date Test Initiated
BOD	000310	X	< 2.0	mg/l	VS	2-4-99
COD	000340	X	57.0	mg/l	VS	2-16-99
тос	000680		-	mg/l		
Suspended Solids	099000	X	30.0	mg/l	vs	2-4-99
TKN	000625		`	mg/l		
Ammonia-N	000610		r	mg/l		
Fecal Coliform	074055	X	1,300 coloni	es/100ml	MJ	2-5-99
Total Phosphorous	000665			mg/l		
Oil & Grease	000550			mg/l		
Chlorides	099016			mg/l		
Phenol	032730			mg/l		
Cyanide	000722			mg/l		
Nitrate-Nitrite	000630			mg/l		
Alkalinity	000410			mg/l		
Hardness	000900			mg/l		
					·	·
	- :					
			•		,	•

	. '	
	•	
	•	
	,	
•		
	•	
	•	
	•	
	•	
		·



STATE OF MISSISSIPPI

DEPARTMENT OF ENVIRONMENTAL QUALITY

JAMES I. PALMER, JR.

EXECUTIVE DIRECTOR

April 21, 1997

Mr. Charles Henderson, Division Manager City of Hattiesburg P. O. Box 1898 Hattiesburg, Mississippi 39401

Dear Mr. Henderson:

Re: NPDES Permit No. MS00203039

Hattiesburg South Facility
NPDES Permit No. MS00208263

Hattiesburg North Facility
Compliance Inspections (CMI)

Enclosed are copies of the compliance inspection reports and sampling results that were performed at the above referenced facilities on March 5, and April 4, 1997. The results of these inspections should be used by you as a guide for complying with requirements and limitations as stated by your NPDES permits. The inspections indicated that the facility was in compliance.

If you have any questions concerning this matter, please contact us at 961-5171.

Respectfully,

Michael J. Freiman Municipal Permit Compliance Branch

MJF

Enclosures

cc: Mr. Michael Hom EPA (w/enclosures)
SRO

THIS COPY FOR

Mr. Paul Zetterholm (w/attachment)

			•			•
			(• •
· •						
·	•					
	•				>	
		•				
·						
			•			
		•				•
	•				. •	
		*				,
					1	ř
				,		
•			•			•
				<u>-</u>	*	•
,		• • •		C 15		,
į.						
*	•				,	
		•				
	•					
						•
	,					•
		·			ř	
•						
•						
•	•			•		
•	•	•				
	, * · · ·					
				•	•	
		•		,		
				• •		
		•				
				4		
			•		•	
· · · · · · · · · · · · · · · · · · ·						
		•	· · · · · · · · · · · · · · · · · · ·			
	٠.					
•				•		

Scheduled April 1997 AERATED LAGO Name of Facility (Mun., Ind., Private		
	Brian Childress Phone No	
1. Pumping station: Yes X No a. Dual Pumps: Yes X No b. Pumps Operable: Yes X No Comment: None	4. Chlorinator and Contact Chamber:a. Operating:b. Baffles Adequate:c. Housing:d. Cylinders on Hand:	Yes No_X Yes No Yes No Yes No Yes No
2. Aeration Cell: (2) a. Color: Green b. Odor: None c. Floating Solids:No_X_Few Many d. Effluent Structure Condition:	How many? e. Solids in Contact chamber: f. Air gap in solution line: g. Chlorine Residual: Comment: None 5. Effluent: (2)	Yes No Yes No Yes No
Condition:		Clear X Yes No_X Yes No_X
Comment: 58 operating, 24 hours 3. Settling Cell: a. Color: Green b. Odor: Yes No_X c. Floating Solids: No_X Few Many_ d. Skimming: N/A Yes No e. Effluent Structure Condition: Good_X Poor f. Dikes: Condition: Good_X Poor Freeboard: 16Ft Grass: Good Comment: None	Locked: b. Upkeep: Goo	Yes_X_No
8. Inspectors recommendations to person contacted: None 9. Verbal commitments of person contacted to correct problems:	None	
10.General comments: None		
11. Does this situation warrant action from the Jackson office: 12. Follow-up inspection scheduled:	YesNo_X YesDate	No <u>X</u>

Time: 11:00 a.m.

					· ,
					e e
:			,		•
					•
	·				
			• .		•
		•			• ,
			•		
•					
	•			•	
				•	
•					•
	·				. '
	•				
	,	•	,		·
					,
				.*	
				•	
			•		
				•	
	•				•
		·			,
	₹. · · · · · · · · · · · · · · · · · · ·				•
		,			:
				-	•
		,			•
		•	•		
				•	•
,	•				
		· ·	•,		
	. *	,	· . *		

BUREAU OF POLLUTION CONTROL SAMPLE REQUEST FORM

Lab Bench No.: 391

Cost Code: 3200

I. GENERAL INFORMATION:

Facility Name: Hattiesburg Aerated Lagoon - South

County Code: 0800

NPDES Permit No.: 20303

Discharge No: 001

Date Requested:

Sample Point Identification:

Effluent - north discharge

Requested By: Compliance Monitoring

Data To:Mike Freiman

Type of Sample:

Grab: X

Composite: Flow:

Time:

Other:

II. SAMPLE IDENTIFICATION:

Environment Condition:

Sunny/clear

Collected By: J.Bonck

Where Taken: Effluent pipe

	Type	Parameters	Preservative	Date	Time
1.	Grab -	BOD,SS	Cool	3/3/97	140
2.	Gran	Fecal	Cool	3/3/97	140
3.		·			
4.					
5.					

III. FIELD:

Analysis	Computer Code	Rec	Results	Analyst	Date
рН	000400	X	8.5	JB	3/3/97
D.O.	000300	,			·
Temperature	000010				
ResidualChlorine	050060				
Flow	074060	X	2.93 mgd	JB	3/3/97

IV. TRANSPORTATION OF SAMPLE:

Bus: X

RO Vehicle:

Other:

V. LABORATORY:

Received by: Kathy Farris

Date: 3/5/97

Time: 1030

Recorded by: Dot Lewis

Date Sent to State Office: 4/z/

VI. Remarks:

				. •	ŧ	
		•				
				•		
		•		-		
					·	
	•					•
•			•			
						• .
	•	*				•
				,		•
•				•	•	
			,	•	·.	•
	•				V	
		•		di ya	•	
					*	•
		•		to the second		
•		*				•
		V				
·				· · · · · · · · · · · · · · · · · · ·	•	
				•		
			•		4	•
		×				
				•		
		*	:			
				, in the second second		
	•				·	4
					•	
					•	
		•				•
	•					
			·			•
				•	• ,	
	•		•			
			•	• .		
			•		· · · · · · · · · · · · · · · · · · ·	4
						• .
				•		
		*				•
			*			

TARGET COMPOUND LIST WET CHEMISTRY PARAMETERS

Lab Bench No.: 391

Analysis	Computer l	Req	Result		Analyst	Date Measured or Date Test Initiated
BOD	000310	X	<9.0	mg/l	vs	3/5/97
COD	000340	X	93.0	mg/l	VS	3/12/97
тос	000680			mg/l		
Suspended Solids	099000	X	25.0	mg/l	KF	3/7/97
TKN	000625		·	mg/l		
Ammonia-N	000610			mg/l		
Fecal Coliform	074055	X	1300 coloni	es/100ml	SN	3/3/97
Total Phosphorous	000665			mg/l		
Oil & Grease	000550			mg/l		·
Chlorides	099016			mg/l		
Phenol	032730			mg/l		
Cyanide	000722			mg/l		
	`					·
					·	
			,			
				,		

Remarks:	 		
		-	

	, ,			
	·			(
		.·	•	
•	•			
			•	`
		· · · · · · · · · · · · · · · · · · ·		
			· •	
		·		
			<i>:</i>	
			•	
			· .	

BUREAU OF POLLUTION CONTROL SAMPLE REQUEST FORM

Lab Bench No.: 392 Cost Code: 3200

I. GENERAL INFORMATION:

Facility Name: Hattiesburg Aerated Lagoon - South -

County Code: 0800 NPDES Permit No.: 20303

Discharge No: 002 Date Requested:

Sample Point Identification: Effluent - south discharge

Requested By: Compliance Monitoring Data To:Mike Freiman

Type of Sample: Grab: X Composite: Flow: Time: Other:

II. SAMPLE IDENTIFICATION:

Environment Condition: Sunny/clear Collected By: J.Bonck

Where Taken: Effluent pipe

	Type	Parameters	Preservative	Date	Time
1.	Grab	BOD,SS	Cool	3/3/97	200
2.	Gran	Fecal	Cool	3/3/97	200
3.		:		·	·
4.		,			
5.				,	

III. FIELD:

Analysis	Computer Code	Rec	Results	Analyst	Date
pН	000400	X	7.3	JB	3/3/97
D.O.	000300				
Temperature	000010				
ResidualChlorine	050060				
Flow	074060	X	7.235 mgd	JB	3/3/97

IV. TRANSPORTATION OF SAMPLE:

Bus: X RO Vehicle: Other:

V. LABORATORY:

Received by: Kathy Farris

Recorded by: Dot Lewis

Date: 3/5/97Time: 1030

Date Sent to State Office: 4/2/97

VI. Remarks:

		•				•				
						•				
•					*		2 · C			
			•			F				
	•		,					•		
	•		•			•	•	i.		
			•							
			•				•			
		•	•				٠.,		. ,	
	•		•				*		,	
	•		•		•		the state of the s	`,		
		. \	•			•				
			•	* * * * * * * * * * * * * * * * * * * *				,	,	
						, ,				
			•*		•			,	*	
		•	· •	•		,	•			•
		*			•		•.			
*			•						•	
			•				· · ·			
	* - 2	•	*							
		,	•			4			**	
		•	**			,	*			
		•		14. g						
			٠			. '**		•		
							•			
						~?		: •	•	
			C.		•		,			
				<i>:</i>		•				
				* .				•	•	
	•		•							
				1						
	*									
		•		•	•					
		*.		*						
	•	•	•	ie.	,				*	
							• "	,		
	•				•	,	1	• ,	,	I
		•		•	•	•	**		•	
		•	•					,		• 1
				•		1			*	
	•							,		'
	•			•		2				1
			• •							
	*	•							•	1
7				•			1			
			•					,		1
				*		i	,		-	
			•				* '			i
,				-			*			1
		•	•		-					ı
								,		1
										·
										1
	,		4							
	9	•	•			•^				1
	0							•		
								*		ł
					•					ı
		•	-		±' .				l	i
			.*			· ·	· .		•	
									1	

TARGET COMPOUND LIST WET CHEMISTRY PARAMETERS

Lab Bench No.: 392

Analysis	Computer l	Req	Result		Analyst	Date Measured or Date Test Initiated
BOD	000310	X	<8.0	mg/l	VS	3/5/97
COD	000340	X	82.0	mg/l	VS	3/12/97
тос	000680			mg/l	,	
Suspended Solids	099000	X	26.0	mg/l	KF	3/7/97
TKN	000625			mg/l		
Ammonia-N	000610			mg/l		
Fecal Coliform	074055	X	300 colonie	es/100ml	SN	3/3/97
Total Phosphorous	000665			mg/l		
Oil & Grease	000550			mg/l		
Chlorides	099016		•	mg/l		
Phenol	032730			mg/l		
Cyanide	000722			mg/l		
			· .			
			i			
					·	

Remarks:	 		 <u> </u>	·
*	*	•		

•	1
	1
	1 1
	1
•	1
	**
	•
	•
•	

BUREAU OF POLLUTION CONTROL SAMPLE REQUEST FORM

Lab Bench No.: 393 Cost Code: 3200

I. GENERAL INFORMATION:

Facility Name: Hattiesburg Aerated Lagoon - North

County Code: 0800 NPDES Permit No.: 20826

Discharge No: 002 Date Requested:

Sample Point Identification: Effluent - south discharge

Requested By: Compliance Monitoring Data To:Mike Freiman

Type of Sample: Grab: X Composite: Flow: Time: Other:

II. SAMPLE IDENTIFICATION:

Environment Condition: Clear sky Collected By: J.Bonck

Where Taken: Rectangular weir

	Type	Parameters	Preservative	Date	Time
1.	Grab	BOD,SS	Cool	3/3/97	1235
2.	Gran	Fecal	Cool	3/3/97	1235
3.					
4.	·				
5.					

III. FIELD:

Analysis	Computer Code	Req	Results	Analyst	Date
pН	000400	X	7.07	JB	3/3/97
D.O.	000300				
Temperature	000010				·
ResidualChlorine	050060	X	.21	JB	3/3/97
Flow	074060	X	1.94 mgd	JB	3/3/97

IV. TRANSPORTATION OF SAMPLE:

Bus: X RO Vehicle: Other:

V. LABORATORY:

Received by: Kathy Farris Date: 3/5/97 Time: 1030

Recorded by: Dot Lewis Date Sent to State Office: 4/z/9/

VI. Remarks:

·	
•	
	Λ
·	
•	
•	
•	•
•	
· · · ·	

TARGET COMPOUND LIST WET CHEMISTRY PARAMETERS

Lab Bench No.: 393

Analysis	Computer l	Req	Result		Analyst	Date Measured or Date Test Initiated
BOD	000310	X	22.0	mg/l	VS	3/5/97
COD	000340			mg/l		
тос	000680			mg/l		
Suspended Solids	099000	X	15.0	mg/l	KF	3/7/97
TKN	000625			mg/l		
Ammonia-N	000610			mg/l		
Fecal Coliform	074055	X	5000 coloni	es/100ml	SN	3/3/97
Total Phosphorous	000665			mg/l		
Oil & Grease	000550			mg/l		
Chlorides	099016			mg/l	·	
Phenol	032730			mg/l		
Cyanide	000722		r	mg/l		
	·					
				· •		
	·					
					·	
<u></u>						
	·					
			,			

Remar	·ks:			 .*	
			•		

	•						
		.					
y e					•		
	•	**,			in the second se		
	a .						. **
	,	· ·	•				
		•			•		
				•	*		
•			•				
•		y = \$	•				
· ·			. •				
	•	•				• •	
	•	1				•	
•	1		• • •		• • •	•	
			:			,	
		•					
· ·			1	•	•		
			e e e e e e e e e e e e e e e e e e e				
				A-1			
		* •					
•							,
		.*			y. +	. *	
	•						·
		÷1			•		
	.*						
		•			·		
					•		
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				<i>),</i>		
	•		*				
			•				
•			4		**		
• .				ς .		•	
				•			
,			•				
		**			· .		
	•		•		* .	\$ *	•
	:						
	•			• •	•		
				•			+ ,
			1	÷	<u>:</u>		•
						•	
		. **			•		
						•	
		,		•			
	•		•	1.1		•	•
	•						*
				•			
						•	
						4	

Scheduled <u>April 1997</u> A	ERATED LAGOC	N INSPECTION REPORT NPD	ES No <u>20826</u>
Name of Facility (Mun., In	d., Private)	Hattiesburg North	
County Forrest Person	Contacted _	Brian Childress Phone No	545-4531
1. Pumping station: Yes_X_No a. Dual Pumps: Yes_X_No b. Pumps Operable: Yes_X_No Comment: None 2. Aeration Cell: (2) a. Color: Green b. Odor: None c. Floating Solids:NoFew_X_Many d. Effluent Structure Condition:		4. Chlorinator and Contact Chamber: a. Operating: b. Baffles Adequate: c. Housing: d. Cylinders on Hand: How many? 8 - 150 1 e. Solids in Contact chamber: f. Air gap in solution line: g. Chlorine Residual: Comment: Did not perform chlorine res	Yes X No Yes No No Yes No No Yes No No Yes No Yes No Yes X Yes X No Yes X Y
f. Aerators: Number		Comment: None 6. General: a. Fence: Locked: b. Upkeep: General: c. Access Road Condition: General: None 7. Certified Operator: Yes X No Date depart	Yes X No
f. Dikes: Condition: Good X Poor Freeboard: 16 Ft Grass: Good Comment: Trees growing on levee. 8. Inspectors recommendations to person con		Cert. No.: 3033 Class: III Expi	res: <u>10-1-99</u>
9. Verbal commitments of person contacted t			
10.General comments: None			
11.Does this situation warrant action from	the Jackson office:	YesNo_X_	
12.Follow-up inspection scheduled:		YesDate	NoX_

Date: 4-4-97

	- 1
	. 1
· ·	
	1
•	1
	1
	1
	. 1
·	·
·	1
	1
	ı
,	1
•	
•	
	•
	•
	· ~
	•
· · · · · · · · · · · · · · · · · · ·	



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4

345 COURTLAND STREET, N.E. ATLANTA, GEORGIA 30365

NOV 1 3 1995

CERTIFIED MAIL P124 043257 RETURN RECEIPT REQUESTED

REF: 4WM-WPEB

Honorable J. Ed Morgan Mayor of City of Hattiesburg Post Office Box 1898 Hattiesburg, MS 39403

SUBJ: Compliance Evaluation Inspection NPDES Permit Number MS0020826

Dear Mayor Morgan:

This office would like to thank your staff for their assistance during the Compliance Evaluation Inspection of the City's North Lagoon wastewater treatment facility on August 21, 1995. The inspection results have been summarized for the facility in the enclosed NPDES Compliance Inspection Report. One or more aspects of plant operations or record keeping were observed as being deficient during the inspection. These deficiencies are highlighted in the attached narrative, followed by their Regulatory Requirement. In addition, Suggestions are included to increase the integrity of the City's self-monitoring program.

Please provide us with the corrective actions the City has taken, or will take, to correct the noted deficiencies. This information must be submitted to this office by November 30, 1995. Until such time as the City achieves compliance with all conditions of its NPDES permit, the City is considered to be in violation of and subject to enforcement action pursuant to the Clean Water Act, 33 U.S.C. Section 1319.



If you have any questions as to the requirements of the permits, or the inspection results, please contact Mr. Roy A. Herwig, P.E. at (404) 347-4793, extension 4255.

Sincerely yours,

Michael Hom, Chief

FL/NC/MS Unit

Enforcement Section

Water Permits and Enforcement Branch

Water Management Division

Enclosures

cc: Mississippi Department of Environmental Quality

		-			
•	•			•	
•		,			
			•	1.0	
• • •				•	•
•			•	,	
	•				
					,
	·*	· · · /·			
				•	
					. *
•			•		
		•			
			•		
•				• •	
			· •		
				•	
		-1			
· · · · · · · · · · · · · · · · · · ·				·	
					; (
					; (
					; (
					; (

Cert #:P124043257 Date Mailed:11/13/95

To: HONORABLE MORGAN

Street:P.O. BX 1898

City:HATTIESBURG State:MS Zip:39403

Sender: ROY HERWIG

Division:WMD Unit:GA

Floor:7TH Building:TOWER Ext.:4255

Alternate: Alt-Ext.:

Date Returned: / /

	t
	1
5	



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4

345 COURTLAND STREET, N.E. ATLANTA, GEORGIA 30365

CERTIFIED MAIL P/24 043 257 RETURN RECEIPT REQUESTED

NOV 1 3 1995

REF: 4WM-WPEB

Honorable J. Ed Morgan Mayor of City of Hattiesburg Post Office Box 1898 Hattiesburg, MS 39403

SUBJ: Compliance Evaluation Inspection NPDES Permit Number MS0020826

Dear Mayor Morgan:

This office would like to thank your staff for their assistance during the Compliance Evaluation Inspection of the City's North Lagoon wastewater treatment facility on August 21, 1995. The inspection results have been summarized for the facility in the enclosed NPDES Compliance Inspection Report. One or more aspects of plant operations or record keeping were observed as being deficient during the inspection. These deficiencies are highlighted in the attached narrative, followed by their Regulatory Requirement. In addition, Suggestions are included to increase the integrity of the City's self-monitoring program.

Please provide us with the corrective actions the City has taken, or will take, to correct the noted deficiencies. This information must be submitted to this office by November 30, 1995. Until such time as the City achieves compliance with all conditions of its NPDES permit, the City is considered to be in violation of and subject to enforcement action pursuant to the Clean Water Act, 33 U.S.C. Section 1319.

		•		
			•	1
				Ì
	•	,		
x	*	•		
	·			İ
				1
		•	·	
	•			1
•				. 1
	•			1
		•		İ
	•			. 1
		• ,		
	(x,y) = (x,y) + (x,y) + (x,y)			1
			•	
		•		
			•	
•				
•				
	·			•
	•			
		• •		
•				
			·	
		•		
	• .			
			. •	
		•		

If you have any questions as to the requirements of the permits, or the inspection results, please contact Mr. Roy A. Herwig, P.E. at (404) 347-4793, extension 4255.

Sincerely yours,

Michael Hom, Chief FL/NC/MS Unit Enforcement Section Water Permits and Enforcement Branch Water Management Division

Enclosures

cc: Mississippi Department of Environmental Quality

PAN HERWIG

f	
ı	
	\mathcal{N}_{i}
	•



United States Environmental Protection Agency . Washington, D.C., 20460

NPDES Compliance Inspection Report

Form Approved OMB No.2040-0003 Approval Expires 7-31-85

Section A: National Data System Coding						
Transaction Code NPDES N 5 MS0020826	YR/MO/DAY 95/08/2		Inspector <u>R</u>	Fac Type <u>1</u>		
Reserved Facility Evaluation Rating 3	ві QA <u>N N</u>		served			
	Sect	ion B: Facility Dat	a			
Name and Location of Facility Inspected			Entry Time/Date: 11:30am 8/21/95	Permit Effective Date: 10/13/92		
City of Hattiesburg North Plant, Lagoon Complex	#2		Exit Time/Date: 4:35pm 8/21/95	Permit Expiration Date: 10/12/97		
Name(s) of On-Site Representative(s)	· .	Ticle(s)		Phone No(s)		
Charles E. "Chuck" Henderson, II Water and Division			nd Wastewater Treatment (601) n Manager			
Name, Address of Responsible Official Hon. J. Ed Morgan P.O. Box 1898	-	Title Mayor	· · · · · · · · · · · · · · · · · · ·			
Hattiesburg, MS 39403	Phone No. (601) 545-4501	Contacted? No				
Section C: Areas Evaluated During	Inspection (S-Satisfactory, M-Margin	al, U-Unsatisfactory,	, N-Not Evaluated)		
S Permit N Flow Measurement N Pretreatment S Operations & Maintenance N Records/Reports N Laboratory N Compliance Schedules N Sludge Disposal S Facility Site Review S Effluent/Receiving Waters M Self-Monitoring Program N Other						
Sec	ction D: S	ımmary of Findings/	Comments			
Note - Public Works Department is located at 900 James Street. See Attached Narrative						
Name(s) and Signature(s) of Inspectors	Agency/Off	ice/Telephone	•	Date		
US-EPA/WMD/(404)- 347-4793 ext. 4255 Roy A. Herwig, P.E.			Oct. 12, 1995			
				Date		
Signature of Reviewer	Agency/Off	ice		Date		
Regulatory Office Use Only						
Action Taken		·	Date	Noncompliance Compliance		

				•	
	•				
	,		e. P		
	v			200	
•					
			•		
					•
		• .			in the second se
					•
			•		4
		•			
					•
	•				
					•
•					•
	•	•			
			•	•	
		•			
	,				
					•
•				•	
					•
		•			
					<u>.</u> '
		·	• .		
		·			
			·		
		-	•		
	•				
				•	
•					
		·			
		•	•		
		•			
	·	•			
	•				
				•	
					,
	•		4.4 C		
	•		•		
			•		
				•	•
•					
			/		• .
	•				
				•	
		•			•
	•				
				•	•
		·		,	

City of Hattiesburg, Mississippi NPDES Permit Number MS0020303 Compliance Evaluation Inspection August 21, 1995

On August 21, 1995, Mr. Roy A. Herwig, P.E. of the United States Environmental Protection Agency, Region 4, conducted a compliance evaluation inspection at the City of Hattiesburg, Mississippi North Lagoon (Lagoon Complex Number 2). Mr. Chuck Henderson, Division Manager was present during the inspection.

Permit

Permit was located at the Department of Public Works office as there is no control building at the facility site.

Records/Reports

Observation: The City did not maintain a sampling log because the samples are collected by the contract laboratory. City personnel do not routinely accompany contract laboratory personnel during sample collection.

Requirement: The permit requires that the exact place, date and time of sampling be recorded. Further, the name of the individual collecting the sample should be recorded.

Suggestion: A City employee should accompany the contract laboratory employee when samples are collected and should record relevant sampling information in the sampling log.

Observation: Chain-of-custody forms are not kept by the City.

Suggestion: The City should maintain chain-of-custody forms for all samples collected at the facility and analyzed by the contract laboratory.

Facility Site Review

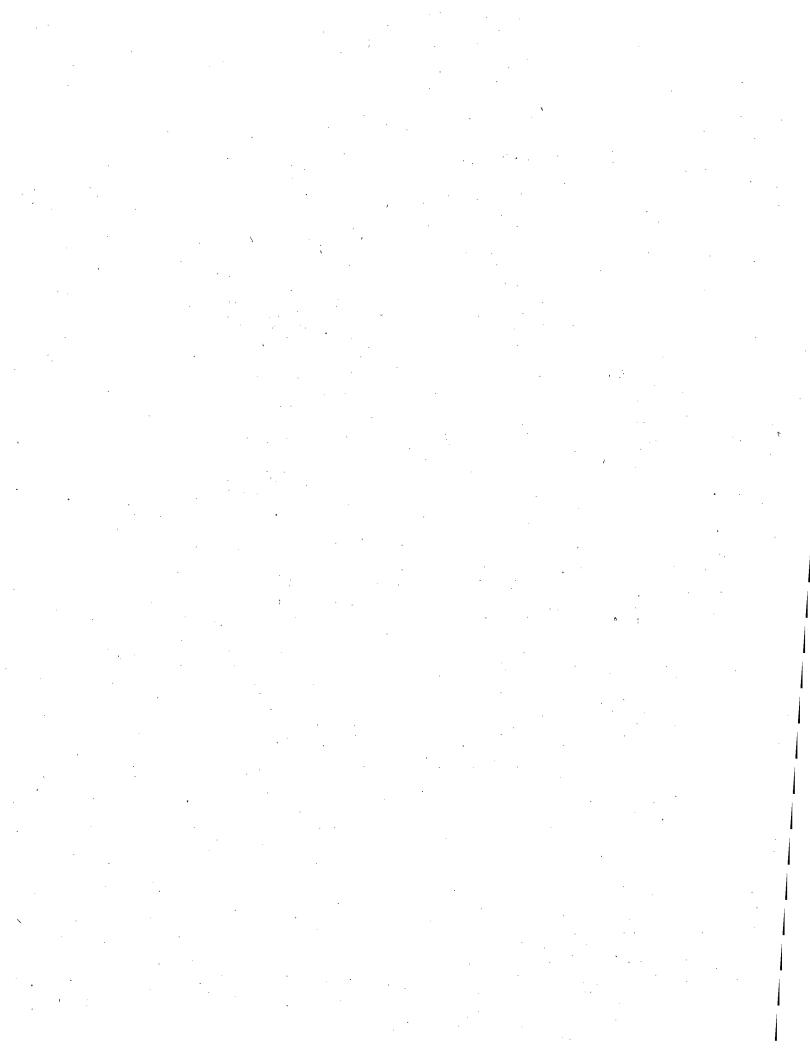
The facility is comprised of two(2) nine acre aerated lagoons in parallel followed by a single polishing pond and disinfection.

Flow Measurement

Flow measured by rectangular weir. The weir appeared to be installed properly and to be well maintained.

Laboratory

Permittee uses a contract laboratory to collect and analyze the samples required by the permit.



Bonner Analytical Testing 2703 Oak Grove Road Hattiesburg, MS 39402 (601) 264-2854

The contract laboratory also prepares the Discharge Monitoring Reports (DMRs) for signature by the City. Bonner Analytical Testing was not inspected.

Effluent/Receiving Waters

Not evaluated due to inaccessibility.

Pretreatment

The pretreatment program was not evaluated - implemented by the State.

Compliance Schedules

Not applicable.

Self Monitoring Program

Based upon observations noted in the Records/Reports section, the self monitoring report was adjudged to be marginal.

Operations and Maintenance

Observation: Operation and maintenance at this facility was satisfactory.

Sludge Disposal

What sludge is generated remains in the ponds.

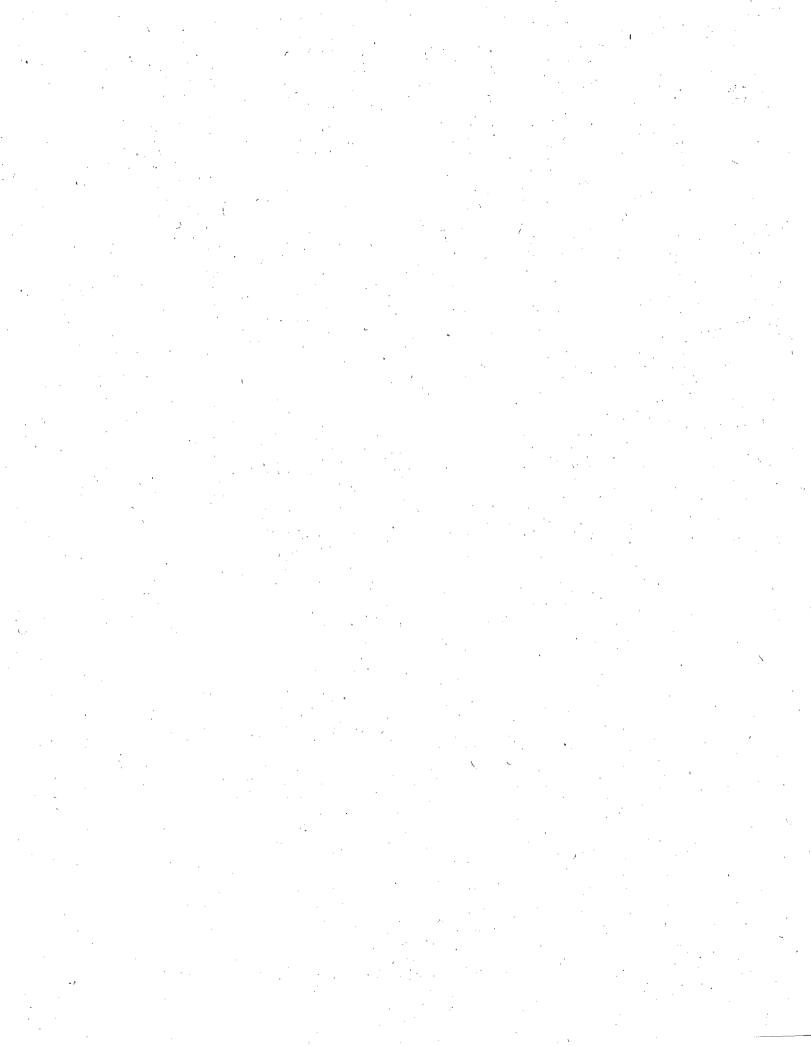
	•
\cdot	
	,
· · · ·	



NPDES Compliance Inspection Report

Form Approved OMB No.2040-0003 Approval Expires 7-31-85

		`		<u> </u>
	Section A: Nation	al Data System Coding		
Transaction Code NPDES YR/I	MO/DAY	Inspection Type	Inspector F	acility Type Sched'd
N MS0020826 95	/05/12	C	s 1	MAY
Reserved Facility Evaluation Rating Bf		QA Reserved		
3N		N	**	
·	Section B: Fact	lity Data		
Name and Location of Facility Inspected			Entry Time:	Permit Effective Date:
HATTIESBURG - NORTH WWTF			7:30 A.M.	10/13/92
HATTIESBURG, MISSISSIPPI			Exit Time/Date:	Permit Expiration Date:
		•	11:30 5/12/	95 10/12/97
Name(a) of On-Site Representative(a)	*	Title(s)	· ·	Phone No(s)
MR. CHUCK HENDERSON		OPERATOR	;	545-4531
Name, Address of Responsible Official		Title		
HON. J. ED MORGAN		MAYOR		
P O BOX 1898		Phone No.		Contacted ·
HATTIESBURG MS 39403		545-4501	<i>.</i>	YES NO_X_
Section C: Areas Evaluated During Ins	pection (S-Satisfactory	, M-Marginal, U-Unsatisfactory, N-Not E	valuated)	
S Permit S Records/Reports Facility Site Review S Effluent/Received		<pre>N Pretreatment N Compliance Schedu S Self-Monitoring F</pre>	ıles <u>Ñ</u> Slud	ations & Maintenance ige Disposal
Section	D: Summary of Finds	ings/Comments		
Names and Signatures of Inspectors	Agency/Office/Telepl	bone	,	Date
MICHAEL J. FREIMAN	Office of	Pollution Control		5/12/95
Signature of Reviewer	Agency/Office			Date
GLENN L. ODOM	Office of	Pollution Control		
	Regulatory O	Office Use Only		
Action Taken			Date	Noncompliance



NPDES COMPLIANCE INSPECTION REPORT

Inspector:

	CITY OF HATTIESBURG	
	MAILING ADDRESS:	
		. 1,
	BRIEF FACILITY DESCRIPTION:	
	AERATED LAGOON	
•	M50020826	
		•
, ·	I. PERMIT CHECKLIST	
NO N/A	1. Correct name and mailing address of permittee.	
NO N/A	2. Facility is as described in permit.	
NO N/A	 Notification has been given to EPA/State of new, different, increased discharges. 	•
1 170 N/A	 Number and location of discharge points are as described in the permit. 	
E NO NIZA	5 Name and location of receiving determ are correct	

7. All records required by permit are available for a minimum of

6. All discharges are permitted.

three years.

NO N/A

NO N/A

	•.*
	v.
	·
	e de la companya de la companya de la companya de la companya de la companya de la companya de la companya de La companya de la co
·	
	·

II. SELF-MONITORING PROGRAM

A. General

YES NO N/A

1. Samples are taken at sites specified in permit.

YES NO N/A

2. Locations are adequate for representative samples.

YES NO N/A

3. Sampling and analysis completed on parameters specified by permit.

TES NO N/A

4. Sampling and analysis done in frequency specified by permit.

YES NO N/A

 Permittee is using method of sample collection required by permit.

YES NO YES NO YES NO NO

6. Sample collection procedures are adequate:

a. Samples refrigerated during compositing

b. Proper preservation techniques used

c. Containers and sample holding times before analyses conform with 40 CFR 136.3

TES NO N/A

7. Monitoring and analyses are performed more often then required by permit. If so, results reported in permittee's self-monitoring report.

YES NO N/A

 Analytical results are consistent with the data reported on the DMR's.

NO N/A
NO N/A
NES NO N/A

NO N/A

NO N/A

- 9. Sampling and Analysis Data are adequate and include:
 - a. Dates, times, location of sampling
 - b. Name of individual performing sampling
 - c. Analytical methods and techniques
 - d. Results of analysis
- e. Dates of analysis
- NO N/A f. Name of person performing analysis

				. ·		
·			•	· .		1
				•		
			• .			
		•				
						٠
				•		
					•	
	• •				,	·.
•						
				n	•	•
	•					
				:		
				•	<i>a</i>	
			te.		: •	
			•			
						•
		,				
4				,		,
		•				
	•					
			:	•		
	į.					,
						•
		•				• .
				•		
	•					•
				•		
				•	•	
e e		•		•		
	•					
•	·					•
						•
				•		

	,				
		B. BOD ₅ Test	Evaluation - N/A	CONTRACT LAB	
	1.	D.O. method used;	a. Winkler Titration b. D.O. Probe c. Other		
	2.	If probe list calibra	tion method; a. Air b. Saturated Water c. Winkler		
YES NO NA	3.	Holding time; < 48 hr	s		
YES NO WA	4.	Preservation; 4 degre	e C		•
YES NO WA	5.	Incubation; 20 degree	C		
YES NO 🕡	6.	Sample D.O. depletion	s; between 2 mg/l and	6 mg/1	
YES NO	7.	Blank D.O. variation;	< 0.2 mg/1	•	
YES NO KO	8.	If effluent is chlorist. a. Sample dechlorinate b. Sample seeded.	•		
		C. Total Suspended So	lide Test Evaluation -	N/n Costone	1 26
YES NO	1	Holding time; < 7 days		14/14 CONTRACT	CITO
YES NO O		Oven temperature; 103			
YES NO (7)		Balance Calibrated.			
YES NO (1/2)		Balance Serviced at 1			
120 110 179	,	balance belviced at 1	edst yearry.	*	
:		D. Ammonia Nitroger	n Test Evaluation – $N/$	A CONTRIUT C	.73
	1.	Method used;		***************************************	,
YES NO	2.	Holding time; < 28 day	ys	· · ·	
YES NO A/A	3.	Preservative; 4 degree	e C, H_2SO_4 to pH < 2		
	•	E. Fecal Coliform	Test Evaluation - N/	A CONTLACT	LAB
	1.	Method used; a. Mi b. Mi c. Or	PN		
₹					
			4		• ` `
			t e	•	•
		1			

) 8

·	
	•
•	•
•	
	•
	·

YES NO N/A	2. Holding time; < 6 hrs
YES NO N/A	3. Preservative; Sterile container, 4 degree C
YES NO N/A	4. 0.008% Na ₂ S ₂ O ₃ ⁵ added if sample chlorinated.
YES NO N/A	5. Water bath temperature; 44.5 degree C
•	F. Dissolved Oxygen Test Evaluation - N/A Contract LAB
	1. Method used; a. Winkler Titration b. D.O Probe c. Other
	2. Calibration (See B. BOD ₅ Test Evaluation #2)
	G. pH Test Evaluation N/A CONTRACT LAS
YES NO NA	1. EPA approved method used. If not, method used:
YES NO N	2. Holding time; analyzed immediately
	H. Aeration Tank Settleability Test Evaluation - N/A
YES NO	1. 1000 ml graduated cylinders used
YES NO	2. Time of test; 30 minutes
	I. Residual Chlorine Test Evaluation
YES NO N/A	1. EPA approved method used. HACH - COLOROMETER
YES NO N/A	2. Holding time; analyzed immediately

III. LABORATORY CHECKLIST

A. General

YES NO N/A

1. Written laboratory quality assurance manual is available.

B. Laboratory Procedures

YES NO

1. EPA approved analytical testing procedures are used.

YES NO (

2. Standard Methods (lastest edition) is available.

YES NO

3. If alternate analytical procedures are used, proper approval has been obtained.

YES NO I

4. Calibration and maintenance of instruments and equipment is satisfactory and records are adequate.

ES NO N/A

5. Quality control procedures are used.

YES NO N/A

6. Commercial laboratory is used

Name BONNER ANALYTICAL
2703 ONK GOVE Rd

Address HATTIESBURG MS 39402

Contact MICHAEL BONNER

Phone 264-2854

C. Laboratory Facilities and Equipment

YES NO

1. Proper grade distilled water is available for specific analysis.

YES NO

2. Fume hood has enough ventilation capacity.

YES NO 1

3. The laboratory has sufficient lighting.

YES NO (1/

4. Adequate electrical sources are available.

		e - *	
	•		
	•		
		•	
		•	
	·		
			•
		•	
		:	
			A contract of the second of th
		•	
			•
		•	
		•	
			•
	1		
		•	
			•
•			•
			•



- 5. Instruments/equipment are in good condition.
- YES NO W
- 6. Written requirements for daily operation of instruments are available.
- YES NO 🕢
- 7. Standards are available to perform daily check procedure.
- YES NO NA
- 8. Written trouble-shooting procedures for instruments are available.
- YES NO DA
- 9. Schedule for required maintenance exists.
- YES NO
- 10. Working standards are frequently checked.
- YES NO WA
- 11. Standards are discarded after recommended shelf life has expired.
- YES NO WA
- 12. Background reagents and solvents run with every series of samples.
- YES NO TO
- 13. Written procedures exist for cleanup, hazard response methods, and applications of correction methods for reagents and solvents.

	•				*			
			•					
		• • •						•
•							• • •	
•	,							
				•				
				•				
							×	٠,
	·				,			
				•			. *	
•		:		•		•		
			· •				,	•
						:		
•								
					·			
•								
								•
	•							
•	•				•			•
				•	٠.			•
•								
				•				•
•			•					
		•		•				
			·					
				•	•		:	I
								'
		*						
								. 1
	•		•					
	• .		*					1
	•					` `		. 1
			•					
•			•					1
								1
								•
•		• .						
			,					
		•						
				• .	•			
						•		
•	. · · ·				•		•	

IV. FACILITY SITE REVIEW CHECKLIST

(E) N	10	N/A	1.	Standby power or other equivalent provision is provided.
YE.3 N	10	N/A	2.	Adequate alarm system for power or equipment failures is available.
(YES) N	10	N/A	3.	All treatment units, other than back-up units, are in service.
Æ N	Ю	Ņ/Λ	4.	Procedures for facility operation and maintenance exist.
PE3 N	Ю	N/A	5.	Organization plan (chart) for operation and maintenance is provided.
ØE)s N	0	N/A	6.	Operating schedules are established.
(E) N	0	N/A	7.	Emergency plan for treatment control is established.
_			8.	Operating management control documents are current and include:
(Es N				a. Operating report
		N/A		b. Work schedule
YES N	0	N/A		c. Activity report (time cards)
YES N			9.	Adequate number of qualified operators are on-hand.
WES N	0	N/A	10.	Established procedures are available for training new operators.
YES N	0	N/A	11.	Adequate spare parts and supplies inventory and major
				equipment specifications are maintained.
YES N	0	N/A	12.	Instruction files are kept for operation and maintenance of each item of major equipment.
YES (N	9	N/A	13	Regulatory agency was notified of by-passing. (Dates No 134 PASSC)
PS NO	0	N/A	14.	Hydraulic and/or organic overloads are experienced. Reasons for overloads
•				Minon Hydraulic due to IsI
•)

		•				1
	•				•••	
		•				
						. 1
					A	
						1
		•		v		!
					,	
		•				
	•		•		•	
		,		· ·		
						1
						1
	·		• • •			1
	•					
			,			1
		•			•	ı
				•	·. ·	*
	•					
•	· ·			÷	•	
·						
				×	_	,
			٠,		,	,
						•
				4	•	
		•	•		•	• • • •
			•			
						,
	•					
						•
				,		
•				•		
,					•	
	*					

TES NO N/A

15. Dated tags show out of service equipment.

(PE)S NO N/A

16. Routine and preventive maintenance are scheduled/performed on time.

17. Plant Records are adequate and include: a. O&M Manual

TES NO N/A YES NO N/A TES NO N/A

b. "As-built" engineering drawingsc. Schedules and dates of equipment maintenance and repairs including cost.

TES NO N/A NO N/A

d. Equipment supplies manual

e. Equipment data cards

		•					
•					•	٠.	• *
		•	•				
· ·		•					
	The second secon						
		•					
	•	:					*
			•				•
				1 .)		• .
				•	· ·		
				•		•	
•		•				٠,	4
					·		
	·	٠.					
	,						
		•			<i>*</i>		
				•			
•					•	· · · · ·	
				·		•	•
		•				ů.	•
	•						* *
						•	
		**************************************			· · · · · · · · · · · · · · · · · · ·	•	
		-			•		
			•	**			
						•	
						4 2 4	
						•	
				**	•		/
				*			
·	•						
					1		
	ı		,				•
•				4		•	•
		•		1	•		
				in the second se			1.4

v. sludge disposal -N/A

	a gallons/day b lbs/day (dry weight)
	 Check the method(s) utilizing for sludge handling: a. aerobic digestion ()
	b. anaerobid digestion ()
•	c. filter press ()
	d. drying bed ()
	e. sludge lagoon ()
	f. other ()
	3. If sludge is hauled offsite for ultimate disposal, what is the quantity and freguency of hauling? a. Quantity:tons
	b. Frequency: () daily () monthly () annually
	c. Ultimate Disposal Site:
,	Location
YES NO NA	4. If sludge is stored in an on-site lagoon or holding pond, has it ever been dredged or otherwise cleaned out? If so, when and where was the sludge disposed? When:
	Where:

•
· · · · · · · · · · · · · · · · · · ·

VI. FLOW MEASUREMENT CHECKLIST

A. General

(YES) NO N/A 1. Primary flow measuring device is properly installed and maintained.

(YE) NO N/A 2. Flow records are properly kept.

(YES NO N/A 3. Sharp drops or increases in flow values are accounted for.

(YES NO N/A 4. Actual flow discharged is measured.

YES (NO N/A 5. Influent flow is measured before all return lines.

RES NO N/A 6. Effluent flow is measured after all return lines.

YES NO N/A 7. Secondary instruments (totalizers, recorders, etc.) are properly operated and maintained.

YES NO (N/A) 8. Spare parts are stocked.

YES NO N/A 9. Flow monitoring records and charts are properly kept.

B. Flumes

YES NO N/A

1. Flow entering flume appears reasonable well distributed across the channel and free of turbulence, boils, or other distortions.

YES NO N/A 2. Cross-sectional velocities at entrance are relatively uniform.

YES NO N/A 3. Flume is clean and free of debris or deposits.

YES NO N/A 4. All dimensions of flume are accurate.

YES NO N/A 5. Side walls of flume are vertical and smooth.

YES NO N/A 6. Sides of flume throat are vertical and parallel.

YES NO N/A 7. Flume head is being measured at proper location.

YES NO N/A 8. Measurement of flume head is zeroed to flume crest.

YES NO N/A 9. Flume is of proper size to measure range of existing flow.

YES NO N/A 10. Flume is operating under free-flow conditions over existing range of flows.

	\mathcal{L}_{i} , \mathcal{L}_{i} , \mathcal{L}_{i} , \mathcal{L}_{i} , \mathcal{L}_{i} , \mathcal{L}_{i}	
	andra de la companya de la companya de la companya de la companya de la companya de la companya de la companya La companya de la co	
•		
*.		
	· · · · · · · · · · · · · · · · · · ·	
		,
•		
'		1
• .		
•		1
•		
		1
		-
		`
		•
		*
		•
		•
		,



United States Environmental Protection Agency,

Washington, D.C., 20460

NPDES Compliance Inspection Report

Form Approved OMB No.2040-0003 Approval Expires 7-31-85

	Section A: Natio	onal Data System Coding		
Transaction Code NPDES	YR/MO/DAY	Inspection Type	Inspector Faci	ility Type Sched'd
N MS0020826	95/05/12	c	S 1	MAY
Reserved Facility Evaluation Rating	BI	QA Reserved		
3	N	N		
	Section B: Fac	cility Data		<u> </u>
Name and Location of Facility Inspected			Entry Time:	Permit Effective Date:
HATTIESBURG - NORTH WWTF HATTIESBURG, MISSISSIPPI			7:30 A.M.	10/13/92
nailleabond, Alasiasili			Exit Time/Date:	Permit Expiration Date:
			11:30 5/12/9	5 10/12/97
Name(s) of On-Site Representative(s)		Title(a)	*	Phone No(s)
MR. CHUCK HENDERSON	,	OPERATOR		545-4531
Name, Address of Responsible Official		Title		
HON. J. ED MORGAN		MAYOR		
P O BOX 1898 HATTIESBURG MS 39403	*	Phone No.		Contacted
MAIIIESBURG MS 37403		545-4501		YES NO_X_
Section C: Areas Evaluated Durin	g Inspection (S-Satisfactor	ry, M-Marginal, U-Unsatisfactory, N-Not E	(valuated)	
S Permit S Flow Measur Records/Reports N Laboratory Facility Site Review Effluent/Re	ement ceiving Waters	<pre>N Pretreatment N Compliance Sched S Self-Monitoring P</pre>	ules <u>N</u> Sludge	tions & Maintenance e Disposal
s	ection D: Summary of Fine	dings/Comments		
سب	>			
Names and Signatures of Inspectors	Agency/Office/Telep	•	•	Date
MICHAEL J. FREIMAN	Office o	of Pollution Control	1	5/12/95
			,	
Signature of Reviewer	Agency/Office	*		Date
GLENN L. ODOM	Office o	of Pollution Control	1	
	Regulatory	Office Use Only		
Action Taken			Date	
				Noncompliance Compliance



NPDES COMPLIANCE INSPECTION REPORT

Inspector: M - 1-12EIMAN

	THE OF MITTIES BURG	_
	MAILING ADDRESS:	
		<u> </u>
•		
		-
	BRIEF FACILITY DESCRIPTION:	
	AERATED LAGOON	
	M500Z0826	•
· .		·
	I. PERMIT CHECKLIST	
NO N/A	1. Correct name and mailing address of permittee.	•
NO N/A	2. Facility is as described in permit.	
NO N/A	 Notification has been given to EPA/State of new, different, increased discharges. 	
20 N/A	 Number and location of discharge points are as described in the permit. 	

7. All records required by permit are available for a minimum of

5. Name and location of receiving waters are correct.

6. All discharges are permitted.

three years.

RES NO N/A

YES NO N/A

YES NO N/A



II. SELF-MONITORING PROGRAM

A. General

YES NO N/A

1. Samples are taken at sites specified in permit.

YES NO N/A

2. Locations are adequate for representative samples.

YES NO N/A

3. Sampling and analysis completed on parameters specified by permit.

TES NO N/A

4. Sampling and analysis done in frequency specified by permit.

YES NO N/A

5. Permittee is using method of sample collection required by permit.

YES NO YES NO YES NO YES

6. Sample collection procedures are adequate:

a. Samples refrigerated during compositing

b. Proper preservation techniques used

c. Containers and sample holding times before analyses conform with 40 CFR 136.3

AES NO N/A

7. Monitoring and analyses are performed more often then required by permit. If so, results reported in permittee's self-monitoring report.

YES NO N/A

8. Analytical results are consistent with the data reported on the DMR's.

NO N/A
NO N/A
NES NO N/A

NO N/A

NO N/A

NO N/A

9. Sampling and Analysis Data are adequate and include:

a. Dates, times, location of sampling

b. Name of individual performing sampling

c. Analytical methods and techniques

d. Results of analysis

e. Dates of analysis

f. Name of person performing analysis

:	April 1				
	•				
			•		
•	•				
* * *		•			•
		• .		•	
		•			
					•
		· <u>`</u>	•		
	•		•		
•				•	
•					
		•		,	
	•			•	
÷				•	
			•		•
•					•
•				e.	•
					•
			$\label{eq:problem} \mathcal{L}_{\mathcal{A}} = \{ \mathbf{r}_{\mathcal{A}} \mid \mathbf{r}_{\mathcal{A}} \in \mathcal{A} \mid \mathbf{r}_{\mathcal{A}} \in \mathcal{A} \}$		
	•				
	•				
	• •				
	•		,		
	•				
•	•	•	1		•
		•			
				• •	
•	•				,
·			,	•	
		•			
			•		
			1		
			•		,
			•		
· ·					
		·			1
			· ·	•	•
		v	•	•	
	•				
	•				
		•			:
			•		
			•		

	B. BOD, Test Evaluation - N/A CONTRACT LAIS
	1. D.O. method used; a. Winkler Titration b. D.O. Probe c. Other
	2. If probe list calibration method; a. Air b. Saturated Water c. Winkler
YES NO NA	3. Holding time; < 48 hrs
YES NO WA	4. Preservation; 4 degree C
YES NO (A)	5. Incubation; 20 degree C
YES NO	6. Sample D.O. depletions; between 2 mg/l and 6 mg/l
YES NO MA	7. Blank D.O. variation; < 0.2 mg/l
YES NO TO	8. If effluent is chlorinated: a. Sample dechlorinated. How? b. Sample seeded.
_	C. Total Suspended Solids Test Evaluation - N/A CONTRACT LAB
YES NO	1. Holding time; < 7 days
YES NO	2. Oven temperature; 103 degree - 105 degree C
YES NO (VA)	3. Balance Calibrated. Frequency?
YES NO WA	4. Balance Serviced at least yearly.
	D. Ammonia Nitrogen Test Evaluation - N/A Contract CAS
	1. Method used;
YES NO	2. Holding time; < 28 days
YES NO NA	3. Preservative; 4 degree C, H ₂ SO ₄ to pH < 2
; ·	E. Fecal Coliform Test Evaluation - N/A CONTINUE LAB
	1. Method used; a. MPN b. MF c. Other

	,
	·
	*
	•
	٠.
· · · · · · · · · · · · · · · · · · ·	

TES NO NYA	2. notating time; to his
YES NO N/A	3. Preservative; Sterile container, 4 degree C
YES NO N/A	4. 0.008% Na ₂ S ₂ O ₃ added if sample chlorinated.
YES NO N/A	5. Water bath temperature; 44.5 degree C
,	F. Dissolved Oxygen Test Evaluation - N/A Contract L
	1. Method used; a. Winkler Titration b. D.O Probe c. Other
•	2. Calibration (See B. BOD ₅ Test Evaluation #2)
	G. pH Test Evaluation N/A CONTRACT LAS
YES NO NA	1. EPA approved method used. If not, method used:
YES NO N	2. Holding time; analyzed immediately
	H. Aeration Tank Settleability Test Evaluation - N/A
YES NO	1. 1000 ml graduated cylinders used
YES NO	2. Time of test; 30 minutes
	I. Residual Chlorine Test Evaluation
YES NO N/A	1. EPA approved method used. HACH - COLOROMETER
YES NO N/A	2. Holding time; analyzed immediately

, , , , , , , , , , , , , , , , , , ,	
•	
•	
•	

III. LABORATORY CHECKLIST

A. General

YES NO (N/A

1. Written laboratory quality assurance manual is available.

B. Laboratory Procedures

1. EPA approved analytical testing procedures are used.

YES NO (1)

2. Standard Methods (lastest edition) is available.

YES NO NT

3. If alternate analytical procedures are used, proper approval has been obtained.

YES NO N/A

4. Calibration and maintenance of instruments and equipment is satisfactory and records are adequate.

ES NO N/A

5. Quality control procedures are used.

YES NO N/A

6. Commercial laboratory is used

Name BONNER ANALYTICAL

2703 ONK GOVE Rd

Address HATTIESBURG MS 39402

Contact MICHAGE BONNER

Phone 264-285L

C. Laboratory Facilities and Equipment

YES NO 1/4

1. Proper grade distilled water is available for specific analysis.

YES NO

2. Fume hood has enough ventilation capacity.

YES NO NO

3. The laboratory has sufficient lighting.

4. Adequate electrical sources are available.





- 5. Instruments/equipment are in good condition.
- YES NO OF
- 6. Written requirements for daily operation of instruments are available.
- YES NO TO
- 7. Standards are available to perform daily check procedure.
- YES NO WA
- 8. Written trouble-shooting procedures for instruments are available.
- YES NO DA
- 9. Schedule for required maintenance exists.
- YES NO O
- 10. Working standards are frequently checked.
- YES NO O
- 11. Standards are discarded after recommended shelf life has expired.
- YES NO (V)
- 12. Background reagents and solvents run with every series of samples.
- YES NO NO
- 13. Written procedures exist for cleanup, hazard response methods, and applications of correction methods for reagents and solvents.

	•
	•
	,
	•
	-
	•
	• .
	•
	•
	•
	•
·	
	. *
	•

IV. FACILITY SITE REVIEW CHECKLIST

(E) NO N/A	 Standby power or other equivalent provision is provided.
YES NO N/A	 Adequate alarm system for power or equipment failures is available.
NO N/A	All treatment units, other than back-up units, are in service.
TES NO N/A	4. Procedures for facility operation and maintenance exist.
(E) NO N/A	 Organization plan (chart) for operation and maintenance is provided.
PES NO N/A	6. Operating schedules are established.
(ES) NO N/A	7. Emergency plan for treatment control is established.
	Operating management control documents are current and include:
ES NO N/A	a. Operating report
A NO N/A	b. Work schedule
YES NO N/A	c. Activity report (time cards)
YES NO N/A	9. Adequate number of qualified operators are on-hand.
WES NO N/A	10. Established procedures are available for training new operators.
VER NO N/A	 Adequate spare parts and supplies inventory and major equipment specifications are maintained.
YES NO N/A	12. Instruction files are kept for operation and maintenance of each item of major equipment.
YES (10) N/A	13. Regulatory agency was notified of by-passing. (Dates No 134 PASSC-)
YPS NO N/A	14. Hydraulic and/or organic overloads are experienced. Reasons for overloads
•	Minon Hydraulic doE to IsI

	•
	,
	. The second of the second of
	•
·	
	·
	·
	•
	·
·	•

FES NO N/A

15. Dated tags show out of service equipment.

(FE)S NO N/A

16. Routine and preventive maintenance are scheduled/performed on time.

17. Plant Records are adequate and include:

TES NO N/A a. O&M Manual

b. "As-built" engineering drawings

c. Schedules and dates of equipment maintenance and repairs including cost.

d. Equipment supplies manual

e. Equipment data cards

YES NO N/A
YES NO N/A

OS NO N/A

•		
•		
	1	
•		
•		
	A.	
•		
	· ·	
		•
		•
		•
		•

v. sludge disposal -N/A

	blbs/day (dry weight)
	Check the method(s) utilizing for sludge handling:
•	a. aerobic digestion ()
	b. anaerobid digestion ()
	c. filter press ()
* *	d. drying bed ()
•	e. sludge lagoon ()
	f. other ()
* *	3. If sludge is hauled offsite for ultimate disposal, what
•	is the quantity and freguency of hauling?
,	a. Quantity: tons
	b. Frequency: () daily () monthly
	() weekly () annually
	() weekly () annually c. Ultimate Disposal Site:
	() weekly () annually c. Ultimate Disposal Site:
6	() weekly () annually c. Ultimate Disposal Site: Name
YES NO (N/A	() weekly () annually c. Ultimate Disposal Site: Name Location
yes no (n/a	() weekly () annually c. Ultimate Disposal Site: Name Location 4. If sludge is stored in an on-site lagoon or holding pond
YES NO NA	() weekly () annually c. Ultimate Disposal Site: Name Location
YES NO NA	() weekly () annually c. Ultimate Disposal Site: Name Location 4. If sludge is stored in an on-site lagoon or holding pond has it ever been dredged or otherwise cleaned out? If so, when and where was the sludge disposed?

	•				
•		\$. "		
	•	•	*		
	•				
			· ·		
	•				
		4			
,	•				
			• •		
·	•				
	•		•		e de la companya de l
	, r		•		
				•	
		-	e.		
		•			•
	e	-			
:	•		•		
·	· "	:	•		
	•				
•					. •
			•		
				. •	·
•	•			•	•
	•				,
		•		•	
				•	·
			•		r
	·	•			•
			•		
		•			
	•				
		• .			•
•					
·					
	,	.*	•		

VI. FLOW MEASUREMENT CHECKLIST

A. General

(YES NO N/A 1. Primary flow measuring device is properly installed and maintained.

(YE) NO N/A 2. Flow records are properly kept.

YES NO N/A 3. Sharp drops or increases in flow values are accounted for.

(YES NO N/A 4. Actual flow discharged is measured.

YES (NO N/A 5. Influent flow is measured before all return lines.

ES NO N/A 6. Effluent flow is measured after all return lines.

YES NO NA 7. Secondary instruments (totalizers, recorders, etc.) are properly operated and maintained.

YES NO (N/A) 8. Spare parts are stocked.

YES NO N/A 9. Flow monitoring records and charts are properly kept.

B. Flumes

YES NO N/A

1. Flow entering flume appears reasonable well distributed across the channel and free of turbulence, boils, or other distortions.

YES NO N/A 2. Cross-sectional velocities at entrance are relatively uniform.

YES NO N/A $\,$ 3. Flume is clean and free of debris or deposits.

YES NO N/A 4. All dimensions of flume are accurate.

YES NO N/A 5. Side walls of flume are vertical and smooth.

YES NO N/A 6. Sides of flume throat are vertical and parallel.

YES NO N/A 7. Flume head is being measured at proper location.

YES NO N/A 8. Measurement of flume head is zeroed to flume crest.

YES NO N/A 9. Flume is of proper size to measure range of existing flow.

YES NO N/A 10. Flume is operating under free-flow conditions over existing range of flows.

			,			
•	γ			v.		
· .					· ·	
	•					
					÷	
		, · ·				
			*			
					•	
				•		•
		<u>,</u> `1		·		I
						.
						1
	•					ı
·	·			· · ·		
						1
	·					

C. Wiers

	1. Type of weir used:
YES NO N/A	2. The weir is exactly level.
NO N/A	The weir plate is plumb and its top edges are sharp and clean.
PES NO N/A	4. There is free access for air below the nappe of the weir.
ES NO N/A	 Upstream channel of weir is straight for at least four times the depth of water level, and free from disturbing influences.
(E) NO N/A	 The stilling basin of the weir is of sufficient size and clear of debris.
ES NO N/A	7. Head measurements are properly made by facility personnel.
RES NO N/A	8. Proper flow tables are used by facility personnel.
	D. Flowmeter
	1. Type of flowmeter used: INSTANTANEOUS READING
	2. The most common problems experienced with the flowmeter:
	3. Measured Wastewater flow: mgd; Recorded flow: %
	4. Design flow:mgd.
YES NO WA	5. Flow totalizer is properly calibrated.
	 Frequency of routine inspection by proper operator: /day.
	7. Frequency of maintenance inspections by plant personnel:/year.
	8. Frequency of flowmeter calibration: /month.
YES NO N/A	 Flowmeter adequate to handle expected ranges of flow rates.
YES NO	10. Venturi meter is properly installed and calibrated.
YES NO	11. Electromagnetic flowmeter is properly calibrated.

			•
· .			
			•
		V	
			•
,			
•			•
	•	• .	
·			
	· · · · · · · · · · · · · · · · · · ·		
	,		
•			
			٠.
			•
			•
•		,	
•		•	
			•
•			,
		•	
	· ·	•	
,	• •		
	•		

VIII. COMPLIANCE SCHEDULE STATUS REVIEW

YES NO (N/A) 1. The permittee has obtained necessary approvals to begin construction.

YES NO (1) 2. Financing arrangements are complete.

YES NO (7). 3. Contracts for engineering services have been executed.

YES NO 10 4. Design plans and specifications have been completed.

YES NO NOA 5. Construction has begun.

YES NO (6. Construction is on schedule.

YES NO (1/2) 7. Equipment acquisition is on schedule.

YES NO N/4 8. Construction has been completed.

YES NO (9. Start-up has begun.

YES NO (7) 10. The permittee has requested an extension of time.

YES NO 11. The permittee has met compliance schedule.

,					• •							
					•		, ·					
				<i>)</i> ,								
		·										,
	Ü							S				
							•					
•												
		•				÷,				٠		
					.			e e				1
		,			,	w.						. 1
				•				• •				
					•			•				
		٠.			,					· ,		. 1
		Č		1			1					1
												1
											,	1
				,							•	
			•	•					·			I

Scheduled AERATED LACC	OON INSPECTION REPORT NPDES NO
Name of Facility (Mun., Ind., Private)	HATTIES BURG - NORTH
	son Contacted Phone No:
1. Pumping Station: Yes X No	4. Chlorinator and Contact Chamber: Yes \(\scale \text{No} \)
a. 27 Dual Pumps Yes X No _ b. Pumps Operable: Yes X No _	
Comment:	c. Housing: Yes X No.
	c. Housing: Yes X No d. Cylinders on Hand: Yes X No
2. Aeration Cell:	150 CB How Many 5
a. Color: GREEN	e. Solids in Contact Chamber: Yes No
b. Odor: NO X Few N	f. Air Gap in Solution Line: Yes No
d. Effluent Structure Condition:	Many g. Chlorine Residual: 3 Yes No Comment:
Good X Poor	Caller:
e. Dikes:	5. Effluent:
Condition: OK /	a. Color: Turbid Clear
Freeboard:	ft. b. Odor: Yes No
Grass: CoT	c. Sample Taken: Yes No
f. Aerators:	Comment:
Number Operable: Yes No	6. General:
Timed: Yes No	a. Fence: Yes≺ No
Comment:	
	b. Upkeep: Ok \sqrt{Poor}
3. Settling Cell:	c. Access Road Condition Good X Poor
3. Color: Duckweed 3. Color: Yes No	d. Safety Hazards: Yes No
J. Odor: Yes No	
c. Floating Solids: No Few 1 d. Skimming: Yes No	Many
e. Effluent Structure Condition	- WEIR PILCHARGE
Good X Poor	, , , , , , , , , , , , , , , , , , , ,
f. Dikes:	
Condition:	
Freeboard: /2	_ ft .
Grass:	
Comment:	
7. Inspectors Recommendations to Person (Contacted:
8. Verbal Commitments of Person Contacted	d to Correct Problems:
·	
9. General Comments:	
Does this situation warrant action fro	om the Jackson Office (YES) (NO)
10. Follow-up Inspection Scheduled: YES	
11. Is responsible certified operator con-	tinuant: YES X NO Date Departed
	ins X No bace beparter
	Inspector M. FREIMAN
	Date
	Time
	ALICE

		:
· ·	·	
	•	
		•
-		
·		
	•	
,		
•		
•		
•		
·		
	•	
· ·		
•		
· ·		



STATE OF MISSISSIPPI

DEPARTMENT OF ENVIRONMENTAL QUALITY

JAMES I. PALMER, JR.

EXECUTIVE DIRECTOR

October 3, 1994

Mr. Chuck Henderson, Manager Water and Sewer Department City of Hattiesburg P.O. Box 1898 Hattiesburg, Mississippi 39403

Dear Mr. Henderson:

Re: NPDES Permit No. MS0020826
Hattiesburg North Lagoon/Complex #2
Compliance Inspection(CEI/3560)

Enclosed is a copy of the compliance inspection report that was performed at the above referenced facility on September 15, 1994. The results of this inspection should be used by you as a guide for complying with requirements and limitations as stated by your NPDES permit. The inspection indicated that the facility was in compliance.

If you have any questions concerning this matter, please contact us at 961-5171.

Respectfully,

Michael J. Freiman Municipal Permit Compliance Branch

MJF:pwt Enclosures cc: SRO

Mr. Paul Zetterholm (w/attachment)

Ms. Yvonne Martin, EPA (w/enclosures)

- This copy for

		,	•			
•						
					•	
			-			
		•		•		
				•		
						•
			•			
				•		
	·		•			
	•					
		· · ·		•	· · ·	
· · · · · · · · · · · · · · · · · · ·	•		,			
			. 1			
			,			
				. •		
		•		•		
•			¢.	. •		
	·				٠	•
•						
•	•				·	,
·			·. · · · · · · · · · · · · · · · · · ·		•	
· · · · · · · · · · · · · · · · · · ·				,		
			•	2 1	*	
			•		*,	•
						1
				•		
						,
	·	**************************************				
		•	•	·.	,	
1						
	,	•				
			•		•	
				,		·



United States Environmental Protection Agency,

Washington, D.C., 20460

NPDES Compliance Inspection Report

Form Approved OMB No.2040-0003 Approval Expires 7-31-85

		Section A: Nation	al Data System Coding		:
Transaction Code	NPDES YR/I	MO/DAY	Inspection Type	Inspector Fa-	cility Type Sched'd
N	MS0020826 94	/09/15	C	s I	AUG
Reserved Facility Evalua	tion Rating SI		QA Reserved		
3	N		N		
•		Section B: Faci	lity Data		
Name and Location of Facility Inspected				Entry Time:	Permit Effective Date:
HATTIESBURG - NORTI HATTIESBURG, MISSI		•		8:30 A.M.	10/13/92
IMITIBODONO, IIIDOI.				Exit Time/Date:	Permit Expiration Date:
				11:30 5/6/9	94 10/12/97
Name(s) of On-Site Representative(s)			Title(s)		Phone No(s)
MR. CHUCK HENDERSOI	N .		OPERATOR		545-4531
Name, Address of Responsible Official	,		Title		
HON. J. ED MORGAN			MAYOR		
P O BOX 1898 HATTIESBURG MS 394	403	•	Phone No.	•	Contacted
HATTLESBURG MS 33	403		545-4501		YES_ NO_X_
Section	C: Areas Evaluated During Ins	pection (S-Satisfactory	, M-Marginal, U-Unsatisfactory, N-Not E	valuated)	
<pre>S Permit S Records/Reports S Facility Site Review</pre>	S Flow Measurement N Laboratory S Effluent/Receiv		N Pretreatment N Compliance Schedu S Self-Monitoring F	ules <u>N</u> Sluxdg	ations & Maintenance ge Disposal
	Section	D: Summary of Find	ings/Comments		
			•		
				*	
, in the second		4	•	•	* · · · · · · · · · · · · · · · · · · ·
	•				•
		Ä			
·			• .		•
				,	
• .					
	· · ,				•
Names and Signatures of Inspectors		Agency/Office/Telepl	hone		Date
MICHAEL J. FREIMAN		Office of	Pollution Control	<u>.</u>	9/20/94
	,				
					•
Signature of Reviewer		Agency/Office			Dete
GLENN L. ODOM		Office of	Pollution Control	L	
		·	Wifee Use Only		
Action Taken				Date	
	•	•			Noncompliance Compliance

•				
:	•			•
				•
·			*	
		•	•	!
•		•		
		•		
:		,		
	•			

		·		
·	*		• • • • • • • • • • • • • • • • • • • •	
•				
		•	•	
•				
•		·		
	,		•	
x = 2			•	
			•	
			:	
		•		
·				
	•	· ·		
			•	
	• • •			
				•
·				
•				
		•		•
				•
		•	•	•
		•	•	
		•	•	
•				
	·			,
		•		
•	•			
;	•		.`	
		•		
			•	
•				
		• •		•
	•	. •		
			,	•
	·	•		

NPDES COMPLIANCE INSPECTION REPORT

Date:	9-15-94 Inspector: M. FREIMAN	
	PERMITTEE:	
11.	9 TTIES BURG	
	MAILING ADDRESS:	
August Head Colonial Coloni		
	BRIEF FACILITY DESCRIPTION:	
		•
	I. PERMIT CHECKLIST	
YES NO N/A	1. Correct name and mailing address of permittee.	,
YES NO N/A	2. Facility is as described in permit.	
YES NO N/A	 Notification has been given to EPA/State of new, different, increased discharges. 	
YES TO N/A	 Number and location of discharge points are as described in the permit. 	
YES NO N/A	5. Name and location of receiving waters are correct.	
YES NO N/A	6. All discharges are permitted.	
YES NO N/A	 All records required by permit are available for a three years. 	minimum of

	·
•	
	·
·	

II. SELF-MONITORING PROGRAM

A. General

YES NO N/A 1. Samples are taken at sites specified in permit.

YES NO N/A 2. Locations are adequate for representative samples.

NO N/A 3. Sampling and analysis completed on parameters specified by permit.

YES) NO N/A 4. Sampling and analysis done in frequency specified by permit.

5. Permittee is using method of sample collection required by permit.

6. Sample collection procedures are adequate: - Contract LAB
a. Samples refrigerated during compositing

b. Proper preservation techniques used

c. Containers and sample holding times before analyses conform with 40 CFR 136.3

7. Monitoring and analyses are performed more often then required by permit. If so, results reported in permittee's self-monitoring report.

8. Analytical results are consistent with the data reported on the DMR's.

9. Sampling and Analysis Data are adequate and include:

a. Dates, times, location of sampling

b. Name of individual performing sampling

c. Analytical methods and techniques

d. Results of analysis

e. Dates of analysis

NO N/A

YES NO N

YES NO N

YES NO N/A

NO N/A

NO N/A

NO N/A

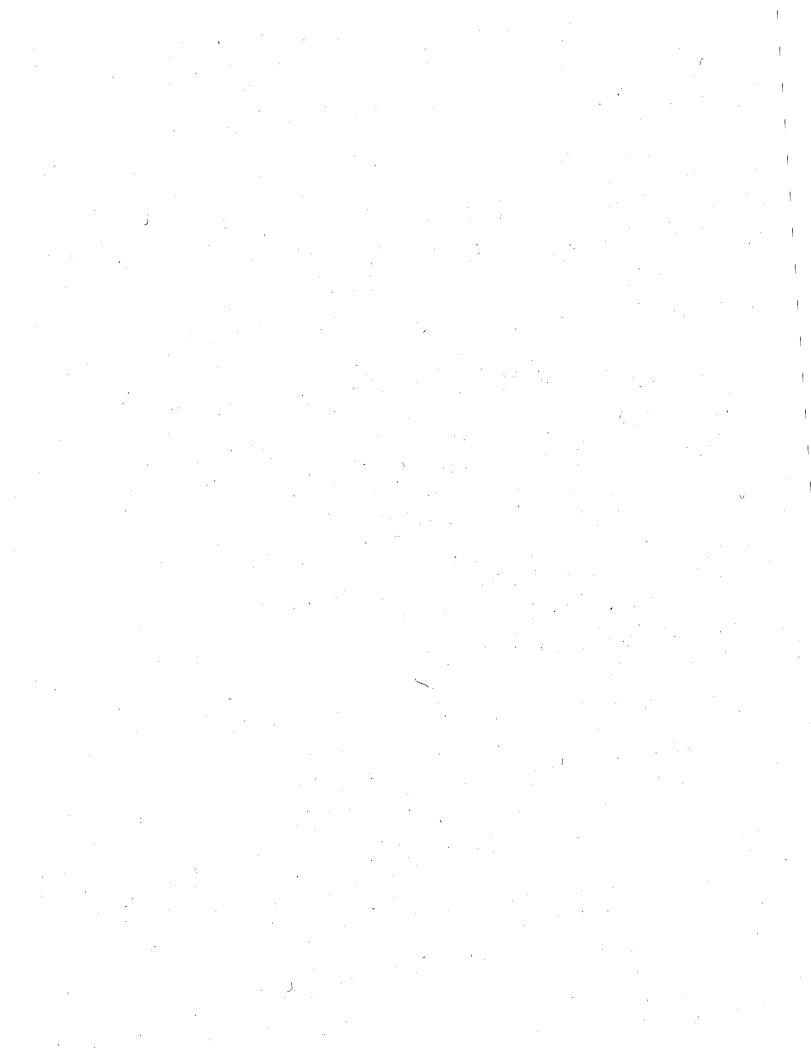
NO N/A

NO N/A

NO N/A NO N/A

YES NO

f. Name of person performing analysis



CONTRACT LAB.

	B. BOD ₅ Test Evaluation $-N//4$
	1. D.O. method used; a. Winkler Titration b. D.O. Probe c. Other
	2. If probe list calibration method; a. Air b. Saturated Water c. Winkler
YES NO WA	3. Holding time; < 48 hrs
YES NO MA	4. Preservation; 4 degree C
YES NO 100	5. Incubation; 20 degree C
YES NO WA	6. Sample D.O. depletions; between 2 mg/l and 6 mg/l
YES NO 🕼	7. Blank D.O. variation; < 0.2 mg/l
YES NO WA	8. If effluent is chlorinated: a. Sample dechlorinated. How? b. Sample seeded.
	C. Total Suspended Solids Test Evaluation $-N/A$
YES NO (N/A	1 Holding time; < 7 days
YES NO N/A	2. Oven temperature; 103 degree - 105 degree C
YES NO VA	3. Balance Calibrated. Frequency?
YES NO N/A	4. Balance Serviced at least yearly.
	D. Ammonia Nitrogen Test Evaluation $-N/\beta$
	1. Method used;
YES NO (A)	2. Holding time; < 28 days
YES NO NYA	3. Preservative; 4 degree C, H_2SO_4 to pH < 2
	E. Fecal Coliform Test Evaluation - N/M
	1. Method used; a. MPN b. MF c. Other

					V.			•	
·		•	.*				· · · · · · · · · · · · · · · · · · ·		
	•						•		
•		•				•			
					•				
	•	·							
			•					•	
			• •	•			•		
			:	•					
	4	-			•			-	
		.•							
v.*					·				
			•			•	•		
	•								
•	. • • •								
					· ·	•			
·		•							
		•						•	
									, n
		•				<i>i</i>			٠
		•				·			
			٠, ٠			•			
		•							
			(+ *						•
,		•••				•			
•	•	•							
•	J		•						
		•	•						
					-				
•				•		•			
		•	. :						
÷					•				
				•					
		·				•			
			•			٠			
				-	. • •	·			
			,						
			•						
					<i>:</i>			٠.	
		· · · · · ·							
			4						
		•							

	•		··
•	•		
. •	YES NO (A)	2. Holding time; < 6 hrs	
	YES NO (TA)	3. Preservative; Sterile container, 4 degree C	
	YES NO	4. 0.008% $Na_2S_2O_3^{5}$ added if sample chlorinated.	· ·
	YES NO (N/)	5. Water bath temperature; 44.5 degree C	
	120 110 1173	5. Water back temperature, 44.5 degree 0	
		F. Dissolved Oxygen Test Evaluation $-N/A$	
I		1. Method used; a. Winkler Titration	· .
÷		b. D.O Probe c. Other	
		2. Calibration (See B. BOD ₅ Test Evaluation #2)	•
	÷	G. pH Test Evaluation $-N/A$	· · · · · · · · · · · · · · · · · · ·
	YES NO NA	1. EPA approved method used. If not, method used:	
	YES NO N/A	2. Holding time; analyzed immediately	
	* . *	H. Aeration Tank Settleability Test Evaluation	
	YES NO (N/A)	1. 1000 ml graduated cylinders used	
	YES NO (N/A)	2. Time of test: 30 minutes	
	IES NO (NY A)	2. Time of test; 50 minutes	
		I. Residual Chlorine Test Evaluation	
A Company	YES NO N/A	1. EPA approved method used. If not, method used: //m/ Colonmeter	
	YES NO N/	2. Holding time; analyzed immediately	
•			
* *			
			•
		•	•
		•	
		5	
•			

									•	
		,								
•								·		
				•						
•	•				•					
	•						s			,
					•				•	
•			•	• .			•			
			•	•			•		•	
					•					1 7
						,				
•						•			:	
							*			•
	• •									
		* .								
•										
										•
				•						
				,						
•			•	,			,			
		•					•			
						•				,
			•	t, t		-				
									•	
					1		•			
								,		
				4.						•
						•				
			• .				•	•		
									•	
	·		•							
					• .					
	•		•		, ,					
				•					• .	
									•	
										*
						*				
					4		•			
						,				•
			,							
						•				•
							•			
							ē.			
	•				*		•			
					, ,		e .			
									•	
										4
				,	•		*			*

III. LABORATORY CHECKLIST

A. General

YES NO	77 p
--------	------

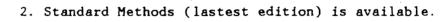
1. Written laboratory quality assurance manual is available.

B. Laboratory Procedures

YES NO NA

1. EPA approved analytical testing procedures are used.

YES NO MY



YES NO NO

3. If alternate analytical procedures are used, proper approval has been obtained.

YES NO NO

4. Calibration and maintenance of instruments and equipment is satisfactory and records are adequate.

YES NO TO

5. Quality control procedures are used.

TES NO N/A

6. Commercial laboratory is used

Name BONNER ANALYTICAL

Address HATTIESBURG

Contact MIKE BONNER

Phone

C. Laboratory Facilities and Equipment

YES NO NFA

1. Proper grade distilled water is available for specific analysis.

YES NO



2. Fume hood has enough ventilation capacity.

YES NO



3. The laboratory has sufficient lighting.

YES NO N/A

4. Adequate electrical sources are available.

		•
·		
		`
		·
	·	•
*		•
•		
•		٠.
•		
	·	
٠		•
•		
		•
		* •
,		
•		
•		



5. Instruments/equipment are in good condition.

YES NO WA

6. Written requirements for daily operation of instruments are available.

YES NO (A

7. Standards are available to perform daily check procedure.

YES NO NA

8. Written trouble-shooting procedures for instruments are available.

YES NO VA

9. Schedule for required maintenance exists.

YES NO (V)

10. Working standards are frequently checked.

YES NO NO

11. Standards are discarded after recommended shelf life has expired.

YES NO NA

12. Background reagents and solvents run with every series of samples.

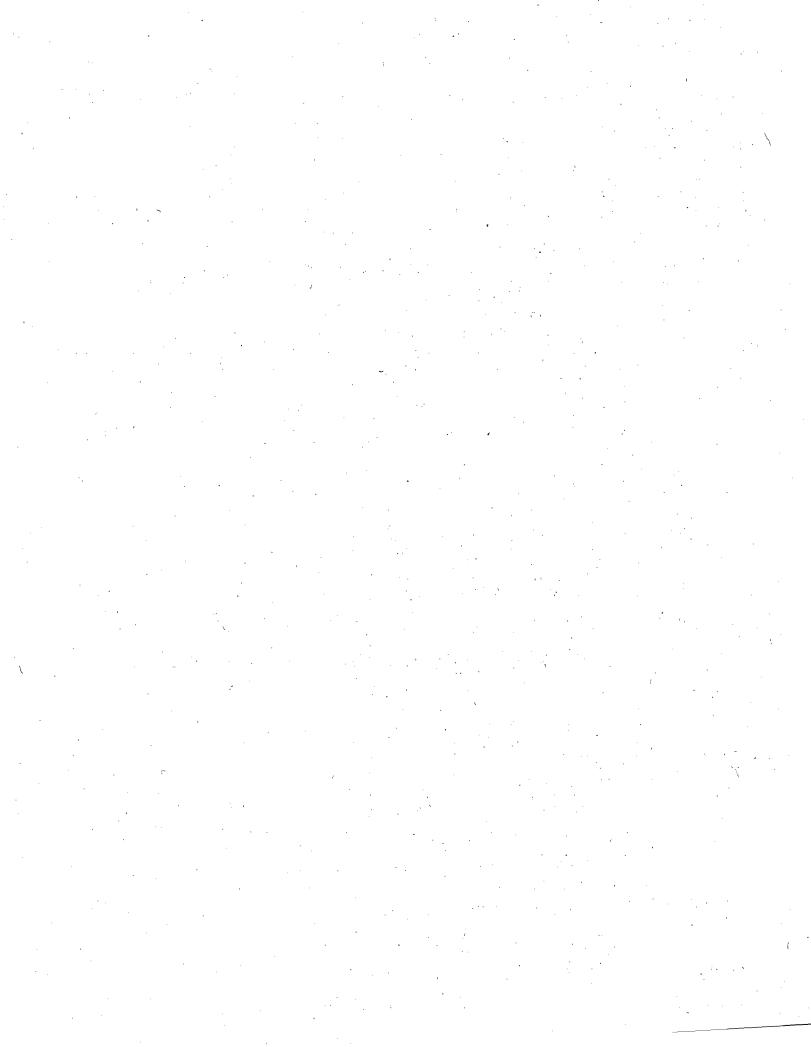
YES NO (1/A)

13. Written procedures exist for cleanup, hazard response methods, and applications of correction methods for reagents and solvents.

				1
		•		
	•			1
				, 1
				ı
			•	. 1
		,		1
	•	•		1
				1
		4		1
		•		. •1
				1
				•
	·	• •	·	1
•				
•		•	•	
				*
•				
			•	
	•			•
			,	
		•	•	
	e e e e e e e e e e e e e e e e e e e	,		
			•	
		•		
,			•	
/	••			
•				
	•			,
	•			
•				
•				
	•			
		*. v.		·
	•			

IV. FACILITY SITE REVIEW CHECKLIST

YES NO N/A	1.	Standby power or other equivalent provision is provided.
VES NO N/A	A 2.	Adequate alarm system for power or equipment failures is available.
YES NO N/	3.	All treatment units, other than back-up units, are in service.
YES NO N/A	4.	Procedures for facility operation and maintenance pexist.
YES NO N/A	5.	Organization plan (chart) for operation and maintenance is provided.
ES NO N/A	6.	Operating schedules are established.
YES NO N/A	7.	Emergency plan for treatment control is established.
E NO N/A	· · · · · · · · · · · · · · · · · · ·	Operating management control documents are current and include: a. Operating report b. Work schedule c. Activity report (time cards)
YES NO N/A	9.	Adequate number of qualified operators are on-hand.
YES NO N/A	10.	Established procedures are available for training new operators.
YES NO N/A	11.	Adequate spare parts and supplies inventory and major equipment specifications are maintained.
YES NO N/A	12.	Instruction files are kept for operation and maintenance of each item of major equipment.
YF) NO N/A	13.	Regulatory agency was notified of by-passing. (Dates)
YES NO N/A	14.	Hydraulic and/or organic overloads are experienced. Reasons for overloads
e e e e e e e e e e e e e e e e e e e		I+I Problem
,		ORDANIC Lands from MARSHALL DURGIN



YES NO N/A

15. Dated tags show out of service equipment.



YES NO N/A

16. Routine and preventive maintenance are scheduled/performed on time.

17. Plant Records are adequate and include:

YES NO N/A YES NO N/A YES NO N/A

a. O&M Manualb. "As-built" engineering drawings

NO N/A

c. Schedules and dates of equipment maintenance and repairs including cost.

d. Equipment supplies manual

e. Equipment data cards

		_			
				·	
				•	
		· · · · · · · · · · · · · · · · · · ·		•	
			•	•	•
				,	
					•
		•	i w	<i>j</i> .	
					* * * * * * * * * * * * * * * * * * * *
		The state of the s			N. Carlotte
			Section 1	J.	v i
				•	
		,	,		
		· .			
			,		
		· · · · · · · · · · · · · · · · · · ·			
	·		į ·		
					,
		•,			,
		,	• •		
11 to 12 to		(
			•		· ·
	•				
					ı
				·	
	•			•	
•					1
					. 1
					i
		•		•	1
					, 1
	· ·	· . · · · · · · · · · · · · · · · · · ·			1
	·.			• •	1
			*	l	1
				•	
			•		. 1
	*		,		4
					1

v. sludge disposal -N/A

	a gallons/day
	b lbs/day (dry weight)
	Check the method(s) utilizing for sludge handling:
	a. aerobic digestion ()
ī	b. anaerobid digestion ()
	c. filter press ()
	d. drying bed ()
	e. sludge lagoon ()
	f. other ()
	3. If sludge is hauled offsite for ultimate disposal, what is the quantity and frequency of hauling? a. Quantity: tons b. Frequency: () daily () monthly
	Name
	Location
ES (NO)N/A	4. If sludge is stored in an on-site lagoon or holding pond,
	has it ever been dredged or otherwise cleaned out? If so, when and where was the sludge disposed? When:
	Where:
•	

•				•				
		,						
		,						
							· .	
					•			•
				·				
						. ,		
					•			
	•	•						
			•	•			•	
	•							
			•		•			
			:	,	•			•
	•							
							٠	
	•				•			
		•						
	, .							
		•			·			
		•			•			
	•	•						
			•					
				·				·
	·							
				~				
	•							I
			·			ſ		
			•					
							•	I
				•				1
•	*			•				1
				•				
								1
								1
				•		•		. 1
								. 1

VI. FLOW MEASUREMENT CHECKLIST

A. General

TES NO N/A

1. Primary flow measuring device is properly installed and maintained.

(ES) NO N/A

2. Flow records are properly kept.

(ES) NO N/A

3. Sharp drops or increases in flow values are accounted for.

YES NO N/A

4. Actual flow discharged is measured.

YES 🔞 🂢

5. Influent flow is measured before all return lines.

YES NO N/A

6. Effluent flow is measured after all return lines.

YES NO MA

 Secondary instruments (totalizers, recorders, etc.) are properly operated and maintained.

YES NO WA

8. Spare parts are stocked.

TES NO N/A

9. Flow monitoring records and charts are properly kept.

B. Flumes

YES NO N/A

1. Flow entering flume appears reasonable well distributed across the channel and free of turbulence, boils, or other distortions.

YES NO N/A

2. Cross-sectional velocities at entrance are relatively uniform.

YES NO N/A

3. Flume is clean and free of debris or deposits.

YES NO N/A

4. All dimensions of flume are accurate.

YES NO N/A

5. Side walls of flume are vertical and smooth.

YES NO N/A

6. Sides of flume throat are vertical and parallel.

YES NO N/A

7. Flume head is being measured at proper location.

YES NO N/A

8. Measurement of flume head is zeroed to flume crest.

YES NO N/A

9. Flume is of proper size to measure range of existing flow.

YES NO N/A

10. Flume is operating under free-flow conditions over existing range of flows.

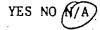
		4	,	•		•				
					. *	•				
		•				•		,		
	,	,	-					•		
			,		,					
				•						
			,				×			
					•		*			
				•						
	,								•	
									•	
		**								
		*		•		·			•	
				,	•					•
								÷-		
								** <i>‡</i>		. •
	,			•		•				
			,				* *			
			4							
					, .					
	•					ė.	, ,	, <i>i</i>	•	,
	•				,	•	·			
,		•					•			
			,			,				
				•	×		• •			1
	•				1			•		i
		•	•					•		1
				* 4			the second second			1
					•	•	•			1
								* ·		1
		•						•	`	· '
	•	•		,	,		*	٠.		i
			••	,						i
•										i i
*							,	-	. 1	ı
								•	: 1 : 1	
		,	,				,	٠.	1	
		,						A	1	
								*	1	
		Χ.	,						1	
							:		i i	
				•					i	
				, .		·	,		1	
						•				

C. Wiers

•		٠	1.	Type of weir used: Rectary LAR
YES	NO N	/A	2.	The weir is exactly level.
YES	NO N	/A	3.	The weir plate is plumb and its top edges are sharp and clean.
YES	NO N	/A	4.	There is free access for air below the mappe of the weir.
YES	NO N	/ A	5.	Upstream channel of weir is straight for at least four times the depth of water level, and free from disturbing influences.
YES	NO N	/A	6.	The stilling basin of the weir is of sufficient size and clear of debris.
YES	NO N	/A	7.	Head measurements are properly made by facility personnel.
YES	NO N	/A ·	8.	Proper flow tables are used by facility personnel.
				D. Flowmeter $-N/\beta$
			1.	Type of flowmeter used: INSTANTANOS FLow Reading
			2.	The most common problems experienced with the flowmeter:
			3.	Measured Wastewater flow: mgd; Recorded flow: mgd; Error %
	,	,	4.	Design flow: mgd.
YES	NO (N		5.	Flow totalizer is properly calibrated.
			6.	Frequency of routine inspection by proper operator:/day.
•			7.	Frequency of maintenance inspections by plant personnel:/year.
			8	Frequency of flowmeter calibration:/month.
YES	NO (N		9.	Flowmeter adequate to handle expected ranges of flow rates.
YES	NO (N,) 10	0.	Venturi meter is properly installed and calibrated.
YES	NO (A)	1	1.	Electromagnetic flowmeter is properly calibrated.
				\cdot

·	
•	
•	
•	
•	
•	
•	
·	
	·
•	

VIII. COMPLIANCE SCHEDULE STATUS REVIEW - N//



1. The permittee has obtained necessary approvals to begin construction.



2. Financing arrangements are complete.

YES NO

3. Contracts for engineering services have been executed.

YES NO 🐼

4. Design plans and specifications have been completed.

YES NO NOA

5. Construction has begun.

YES NO N

6. Construction is on schedule.

YES NO (N)

7. Equipment acquisition is on schedule.

YES NO NA

8. Construction has been completed.

YES NO N

(N) 9. S

9. Start-up has begun.

YES NO NA

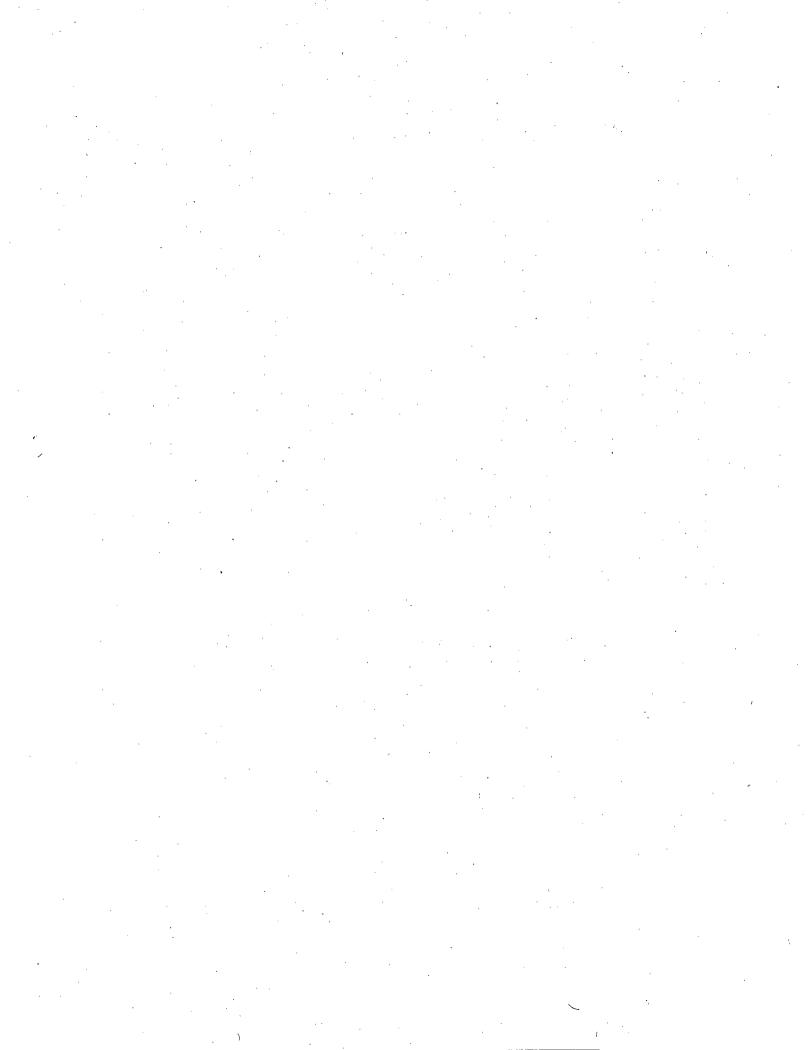
10. The permittee has requested an extension of time.

YES NO N/A

11. The permittee has met compliance schedule.

	•
	in the state of the state of the state of the state of the state of the state of the state of the state of the
•	·

Sch	eduled AERATED LAG	OON INSPECT	TION REPORT NPDEX	S NO
Nam	e of Facility (Mun., Ind., Private)	latties is	BURY - NORTH	
^		son Contact		Phone No:
1.	Pumping Station: a.3 Deal Pumps b. Pumps Operable: Comment: Yes X No Yes X No Yes X No Yes X No		a. Operating:b. Baffles Adequatec. Housing:	e: Yes No
2.	Aeration Cell: a. Color: (7/96) b. Odor: NO c. Floating Solids: No Effluent Structure Condition: Good Poor	— Many X	e. Solids in Conta f. Air Gap in Solu	How Many 5
	e. Dikes: Condition: Freeboard: Grass: f. Aerators:	5. ft . —	Effluent: a. Color: b. Odor: c. Sample Taken: Comment:	Turbid Clear X Yes No X Yes No X
	Number / 8 Yes X No		General: a. Fence: Locked b. Upkeep:	Yes X No Yes X No Ok X Poor
3.	d. Skimming: Yes No > e. Effluent Structure Condition Good X Poor f. Dikes: Condition: 700	Many X	c. Access Road Cor	edition Good X Poor_ Yes No_X
	Freeboard: 10 Grass: Cu7 Comment:	_rt. 		
7.	Inspectors Recommendations to Person (Contacted:_		
8.	Verbal Commitments of Person Contacted	d to Correc	t Problems:	
·9.	General Comments:			
10.	Does this situation warrant action fro Follow-up Inspection Scheduled: YES Is responsible certified operator conf	Date	NX	(NO) Departed
		Inspector_		· .
		Date Time	· . · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·





STATE OF MISSISSIPPI

DEPARTMENT OF ENVIRONMENTAL QUALITY

JAMES I. PALMER, JR.

EXECUTIVE DIRECTOR

Major

Municipal

November 9, 1993

Mr. Chuck Henderson, Manager Water and Sewer Department City of Hattiesburg P.O. Box 1898 Hattiesburg, Mississippi 39403

Dear Mr. Henderson:

Re: NPDES Permit No. MS0020826
Hattiesburg North Lagoon/Complex #2
Compliance Inspection CEI/7500

Enclosed is a copy of the compliance inspection report that was performed at the above referenced facility on October 19, 1993. The results of this inspection should be used by you as a guide for complying with requirements and limitations as stated by your NPDES permit. The inspection indicated that the facility was in compliance.

If you have any questions concerning this matter, please contact us at 961-5171.

Respectfully,

Michael J. Freiman

Municipal Permit Compliance Branch

MJF:ap Enclosures

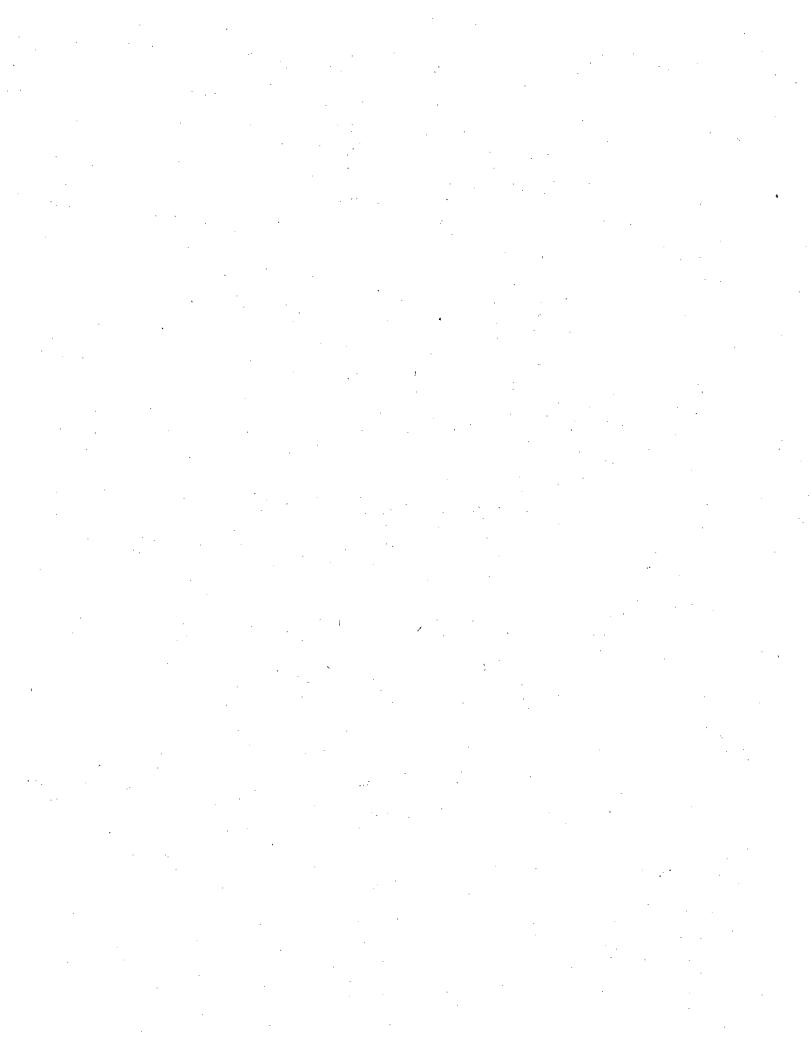
cc: Mr. Al Herndon, EPA (w/enclosures)

SRO

Mr. Paul Zetterholm (w/attachment)

601) 961-5171

OFFICE OF POLLUTION CONTROL, P. O. BOX 10385, JACKSON, MS 39289-0385, (601) 961-5171



Mississippi Department of Environmental Quality Office of Pollution Control

Form 7500

Date of Inspection

Sample Taken

REPORT	$\mathbf{C}\mathbf{N}$	OPERAL	MOL	and	MA	INTENANCE	OP
Ta	ACIT	STPANE	TER	MIME	T	VIII.TI')A'T	

<u> 10-19-93</u>

___ Yes <u>X</u> No

		A. GENERAL INFOR	MAITON	,
1.	Facility			·
(a.) Name South Lagoon	(b.) Owner C	ity of	(c.) Location City Hall,
(α.	Complex #1	, ,	lattiesburg	Hattiesburg, MS, Forrest O
		·		
2.	Type of Facility 3	3. Avg. Design 1	Flow (mgd)	4. Design Population Equivalent
	Aerated Lagoon	10 MGD (per	outfall)	100,000
5.	Collection System 6			Operating 7. Permit No.
	Combined		5 - In 1991	MS002030
	Separate X	aerat	ion was added.	
	Both			
	In the Cases Descrided Polest Firm	nich a Cimplica	Flor Diagram or	a Whitton Possintion
8.	In the Space Provided Below, Fun of the Facility Units in Flow Se		TION DIAGRAM OF	a arrecen rescription
	See attached sheet.	•		
		*		
	•			
9.	Identify Receiving Waters Leaf	River		
				. <u> </u>
	B. CURRI	ENT FACILITY LOA	DING	
	· · · · · · · · · · · · · · · · · · ·			
1.	Annual Avg. Daily Flow Rate (mgd) 2. Peak Flow Dry Weather	Rate (mgd) Wet Weather	3. Population Served
	Outfall 001 - 3.87	2.71	8.51	48,000
	Outfall 002 - 4.56	5.75	9.17	
4.	Outfall 002 - 4.56 Annual Avg. BOD5 of Raw Sewage (1		5. Annual Avg	. Suspended Solids of Raw
4.			5. Annual Avg Sewage (m	-
4.	Annual Avg. BOD5 of Raw Sewage (1		5. Annual Avg Sewage (m <u>O</u> Out	g/1) utfall 001 - 105 fall 002 - 198
	Annual Avg. BOD5 of Raw Sewage (1 Outfall 001 - 110 Outfall 002 - 427 Principal Types of Industrial Was	mg/l)	5. Annual Avg. Sewage (m Out. 7. Population	g/1) utfall 001 - 105 fall 002 - 198 Equivalent (BOD) of
4.	Annual Avg. BOD5 of Raw Sewage (1 Outfall 001 - 110 Outfall 002 - 427	mg/l)	5. Annual Avg Sewage (m <u>O</u> Out	g/1) utfall 001 - 105 fall 002 - 198 Equivalent (BOD) of
	Annual Avg. BOD5 of Raw Sewage (1 Outfall 001 - 110 Outfall 002 - 427 Principal Types of Industrial Was	mg/l)	5. Annual Avg. Sewage (m Out 7. Population Industrial	g/1) utfall 001 - 105 fall 002 - 198 Equivalent (BOD) of
6.	Annual Avg. BOD5 of Raw Sewage (1 Outfall 001 - 110 Outfall 002 - 427 Principal Types of Industrial Was Discharged to Municipal System Poultry Processing - 002	mg/l)	5. Annual Avg. Sewage (m Out 7. Population Industrial Unk	g/l) utfall 001 - 105 fall 002 - 198 Equivalent (BOD) of Wastes cnown
	Annual Avg. BOD5 of Raw Sewage (1 Outfall 001 - 110 Outfall 002 - 427 Principal Types of Industrial Was Discharged to Municipal System Poultry Processing - 002 Population Equivalent (SS) of	mg/l)	5. Annual Avg. Sewage (m Out 7. Population Industrial Unk	g/1) utfall 001 - 105 fall 002 - 198 Equivalent (BOD) of Wastes
6.	Annual Avg. BOD5 of Raw Sewage (1 Outfall 001 - 110 Outfall 002 - 427 Principal Types of Industrial Was Discharged to Municipal System Poultry Processing - 002 Population Equivalent (SS) of Industrial Wastes	mg/l)	5. Annual Avg. Sewage (m Out 7. Population Industrial Uni 9. Volume of	g/l) utfall 001 - 105 fall 002 - 198 Equivalent (BOD) of Wastes known Industrial Wastes (mgd)
6.	Annual Avg. BOD5 of Raw Sewage (1 Outfall 001 - 110 Outfall 002 - 427 Principal Types of Industrial Was Discharged to Municipal System Poultry Processing - 002 Population Equivalent (SS) of	mg/l)	5. Annual Avg. Sewage (m Out 7. Population Industrial Uni 9. Volume of	g/l) utfall 001 - 105 fall 002 - 198 Equivalent (BOD) of Wastes cnown

			٠.	,		
	•					
		•				
			·	•		
•						
				·		•
						•
•						
	· •					
					•	9
	• ;	•			,	
			•		•	
	٠.	• .				
	•	.• •				
		·				
•						
		V				

C. FACILITY PERFORMANCE

LABORATORY ANALYSIS
(a) Reporting Period

1.

) Reporting Period Outfall (001
------------------------------	-----

From	(Month, Year) Octo	ber 1992	OT	(Month, Year)	October 1993
	Parameter	Actual Facility Performance Data (a)	Facility Design Data (b)	NPDES Permit Requirements (C)	Facility Complies With Permit (d) Indicate One
(1)	Flow (mgd) (monthly avg.)	3.87	10	10	Yes X No
(2)	Peak Flow (mgd) (maximum day)	9.17	10		Yes No
(3)	Suspended Solids (monthly avg.) Influent (mg/l)	104.5	•		YesNo
	Effluent (mg/l)	48.8		90	Yes X No
	% Removal	45			YesNo
(4)	BOD5 (mo. avg.) Influent (mg/l)	109.6			YesNo
	Effluent (mg/l)	25.1		45	YesNo_X
	% Removal	72.3		65% Monthly Avg.	YesNo_X
(5)	Dissolved Oxygen Effluent (mg/l) Minimum	· · · · · · · · · · · · · · · · · · ·			YesNo
(6)	Chlorine Residual Effluent (mg/l) Maximum				Yes No
(7)	Fecal Coliform Fecal (per 100 ml) Geometric Mean May - October	al not being taken	due to Commission (Order by MS DEQ.	YesNo
•=	Nov April		·		Yes No_
(8)	pH Range Effluent Minimum	7.24		6.0	Yes X No
·	Maximum	9.27	<u> </u>	8.5	YesNo_X
(9)	Ammonia Nitrogen (monthly avg.) Influent (mg/l)		· . ·		YesNo
,	Effluent (mg/l)				Yes No



C. FACILITY PERFORMANCE

LABORATORY ANALYSTS

Effluent (mg/l)

1.			CORATORY ANALYSIS Reporting Period	Outfall 002				
From	(Month, Year) Octo	ber 1992		Month, Year)	October 199	3		
LLCan	(Ibrial) tour)	<u> </u>	10 (Fixing) 16at) October 1.995					
	Parameter	Actual Facility Performance Data (a)	Facility Design Data (b)	NPDES Permit Requirements (C)	Facility Co With Perm (d) Indicate	it ,		
(1)	Flow (mgd) (monthly avg.)	4.56	10	10	Yes	No		
(2)	Peak Flow (mgd) (maximum day)	9.17		<u>:</u>	Yes_X	No		
(3)	Suspended Solids (monthly avg.) Influent (mg/1)	198		· · · · · · · · · · · · · · · · · · ·	Yes	No		
	Effluent (mg/l)	67		90	Yes	No_X		
	% Removal	65		-	Yes	No		
(4)	BOD5 (mo. avg.) Influent (mg/l)	427		· · · · · · · · · · · · · · · · · · ·	Yes	No		
	Effluent (mg/l)	29	·	45	Yes X	No		
	% Removal	90		65% Monthly Avg.	Yes_X	No		
(5)	Dissolved Oxygen Effluent (mg/l) Minimum				Yes	No		
(6) ⁻	Chlorine Residual Effluent (mg/l) Maximum				Yes	No		
(7)	Fecal Coliform Fec (per 100 ml) Geometric Mean	al not being taken	due to Commission C	order by MS DEQ.		(vision hande		
	May - October	·			Yes	No		
	Nov April			-	Yes	No		
(8)	pH Range Effluent Minimum	6.83		6.0	Yes_X_	No		
•	Maximum	9.59		8.5	Yes	No_X_		
(9)	Ammonia Nitrogen (monthly avg.) Influent (mg/l)				Yes	No		

Yes_

No

•						
				•		4,
	•					
	•					
					- -	
					ب	
			·			
		·.				

2.	FACILITY RECORDS		
	Are Discharge Monitoring Reports filed with DEC)/OPC	? <u>X</u> YesNo
3.	DOES FACILITY HAVE ALTERNATE POWER SOURCE? 4.		QUATE ALARM SYSTEM FOR POWER OR QUIPMENT FAILURES?
Gen	Dual Feed <u>X</u> GeneratorNone erator operates lift stations but not the aerator		
5.	FQUIPMENT PROGRAM Adequate Inadequate	6.	IS FACILITY EFFLUENT 7. IS FACILITY BEING CHLORINATED? EFFLUENT
(a.	Routine Maintenance Schedules X		BEING DE- CHLORINATED?
(b.	Records of Maintenance Repairs & Replacement X		YesYesYesYo
(c.	Spare Parts Inventory X		
8.	DOES SEWAGE BYPASS FACILITY IN WET WEATHER?	9.	DOES SEWAGE BYPASS FACILITY IN DRY WEATHER? NO
10.	IS THE DEQ/OPC BEING NOTIFIED OF EACH BYPASS? N/A	11.	BYPASS FREQUENCY (monthly) N/A
12.	AVG. DURATION OF BYPASS (hrs) N/A	13.	REASON FOR BYPASSING N/A
14.	CAN BYPASS SEWAGE BE CHLORINATED?	15.	DO SEWER OVERFLOWS OCCUR UPSTREAM OF FACILITY?
	Yes <u>X</u> No		Yes <u>X</u> No
16.	REASON FOR OVERFLOWS N/A	17.	ANY ODOR COMPLAINIS BEYOND FACILITY PROPERTY? (If yes, explain) None
18.	OBSERVED APPEARANCE OF EFFLUENT, RECEIVING STREAT in effluent but being mixed with large volume of discoloration at both outfalls.		
19.	DO OPERATORS AND OTHER PERSONNEL ROUTINELY ATTEND SHORT COURSES, SCHOOL OR OTHER TRAINING? X YesNO	20.	IS LAB TESTING ADEQUATE FOR THE CONTROL REQUIRED FOR THIS SIZE AND TYPE OF FACILITY AND USES OF RECEIVING WATERS?
	(a.) If yes, cite course sponsor, and date of last course. Nov. Short Course offered DEQ of MS.		X YesNo (If no, explain)
	(b.) If no, are there any courses available in this area?		
	(c.) Is there an established procedure for training new operators?		

•	
•	

21. EXPLAIN MAIN DIFFICULTY EXPERIENCED WITH INDUSTRIAL WASTES Elevated BOD levels (Lagoon 002) sometime attributed to the chicken processing.
22. PERMANENT RECORD FILE
(a.) Facility operation and maintenance manual? X YesNo (b.) As built plans and specifications? X YesNo (c.) Manufacturers operation and maintenance specifications? X YesNo (d.) Flow charts? X YesNo
23. ANNUAL BUDGET FOR MAINTAINING AND OPERATING FACILITY
Salaries & Wages Electricity Chemicals Maintenance Staffing & Training Other Total 119,200 277,000 8,000 56,000 1,000 51,800 513,000 *These figures represent total budget for City of Hattiesburg sewer services (both facilities)
24. STABILIZATION PONDS
(a.) Weeds cut and vegetation growth in ponds removed? (b.) Banks and dikes maintained? (erosion, etc.)
_X_YesNoNo
(c.) Any reports of ground water contamination from pond? (If yes, give details)
YesX_No
(d.) Seepage reported? (e.) Adequate depth control? (f.) Effluent release is
Yes _X_No _X_YesNo _X_ContinuousIntermittentSeasonal

D. LABORATORY CONTROL

CODING INSTRUCTION

Enter test codes opposite appropriate items. If any of the below tests are used to monitor industrial wastes, place an "X" in addition to the test code.

1 - 7 or more per week	3 - 1, 2 or 3 per week	5 - 2 or 3 per month	7 — Quarterly
2 - 4, 5 or 6 per week	4 - as required	6 - 1 per month	8 - Semi-Annually
		•	9 - Annually

Item	Raw (a)	Mixed Liquor (b)	Final (c)	Sludge Super- natant (d)	Digester (e)	Receiving Stream (f)
1. BOD or CBOD	_6_		6			·
2. Suspended Solids	_6_		6			
3. Settleable Solids	,					
4. Dissolved Oxygen					<u> </u>	
5. Total Solids						
6. Volatile Solids	. —	·				
7. pH			6			
3. Fecal Coliform		· · · · · · · · · · · · · · · · · · ·				
9. Residual Chlorine		· · · · · · · · · · · · · · · · · · ·				
10. Flow			_3_		· · · · · · · · · · · · · · · · · · ·	
11. Ammonia Nitrogen		·				
12.						
13.				· · · · · · · · · · · · · · · · · · ·		
Comments: None		<u> </u>				

•			
		•	
		• •	
•			
•	•		
·			•
		•	
		•	
		•	
•			
		±	
•			
	i de la companya de l		
•			•
	· ·		
•	<u>.</u>		
		• •	•
•			•
•		, ,	
•			
·			
	•		
		• • • • • • • • • • • • • • • • • • •	
		·	
•			
	•		
•			
•			
	·	<i>*</i>	
•	•		
		1	
		The state of the s	
	• •	,	•
			,
•			
			'
•		·	
		•	
	·		
•			
•			
		•	•
•	· .		

E. FACILIE	TY PERSONNEL	INVENTORY			
Personnel Classification (a.)		Employmen (b.)	t		· · · · · · · · · · · · · · · · · · ·
	Act	ual			
	Man-Hours Per Week	Number	Number Budgeted		Certification Number
1. Management/Supervisor	40	1	1_	Class III Class III	2177 2095
2. Certified Operator in Charge	_20	_•5	<u>.5</u>	Class II	2122
3. Laboratory		: —			
4. Maintenance	40	1	1		·
5. Other Facility Workers	100	2.5	2.5		
6. Other Office/Clerical					
7. Total	200	5	5		
	Conditi	on or Appear Rating	rance	Comments	3
1. GENERAL					
Grounds		<u></u>			· · · · · · · · · · · · · · · · · · ·
Buildings		<u>S</u>			•
Potable Water Supply Protection	<u> </u>	S			
Safety Features		<u>S</u>			
Bypasses	,	_S_			
Overflows		S			
2. PRELIMINARY					
Maintenance of Collection Systems		_S_			
Pump Station		<u>S</u> _			
Ventilation		S			
Bar Screen		N/A			<u> </u>

	• .
•	
•	
	·
·	
	·
	·

	Condition or A		· (Comments	
2. PRELIMINARY (CONT.)		· · · · · · · · · · · · · · · · · · ·			
		 	<u>.</u>		···-
Disposal of Screenings	<u>N/A</u>		· · ·		
Comminutor	N/A				
Grit Chamber	<u>N/A</u>	`			
Disposal of Grit	<u>N/A</u>		<u> </u>		
3. PRIMARY	<u> </u>		· · · · · · · · · · · · · · · · · · ·		
Settling Tanks	N/A		· .		
Scum Removal	<u>N/A</u>				
Sludge Removal	N/A				
Effluent	N/A				
4. SLUDGE DISPOSAL				<u> </u>	
Digesters	N/A	4,		 	
Temperature and pH	<u>N/A</u>		<u> </u>		·
Gas Production	N/A				
Heating Equipment	<u>N/A</u>				1
Sludge Pumps	N/A		· · · · · · · · · · · · · · · · · · ·		,
Drying Beds	<u>N/A</u>				
Vacuum Filter	N/A				
Incineration	N/A				
Disposal of Sludge	<u>N/A</u>	· · · · · · · · · · · · · · · · · · ·			
					•
5. OTHER			:		
Flow Meter and Recorder	N/A	Instantaneous	readings		
Records	<u>S</u> _		•		
Iab Controls	_ <u>S</u>	Lab work perf f Hattiesburg.		Bonner Ar	alytical

	• .	
	•	
	•	
• • •		
•		
		•
•		
	·	·
		•
		•
		• •
		.:
	•	
· · · · · · · · · · · · · · · · · · ·		
		•
		•
	· · · · · · · · · · · · · · · · · · ·	
	• •	
·		

	Condition or Rati		Comments
6. SECONDARY-TERTIARY (List items as required)			
Aeration Cell No. 1	S		· · ·
Aeration Cell No. 2	S		
Polishing Pond No. 1	<u>S</u>		
Polishing Pond No. 2	M		ue to floating algae mat in
	-		
7. CHLORINE			
Effluent	_ <u>M</u>		on of receiving stream at
Chlorinators	N/A		
Effective Dosage	<u>N/A</u>		
Contact Time	N/A		
Contact Tank	<u>N/A</u>	· · ·	
Dechlorination	N/A		.•

	•		<u>.</u>				
			,				
				•			•
			•	•	4		•
		•					•
			•				
÷		a.			•	•	٠.
							•
		•					
			1				
	•						
		•					
							•
			·	4			
		•			٠.		
•				•			
		1		*	`		
							•
	•		•				•
		• •				•	
			.*			*	
							\
				* .			
		6 m				•	
	•						
		•					
						4	•
	•	-					•
		•					•
	•						•
				•			
	•						
			· ·				
ţ			•				
		•					•
		•					
•							
	•	•	•	•		•	
					`		•
					. •	•	· ·
			/			•	
	•	•					
		* •					* *
	•						
				•		•	
		, ,					
	•		**************************************				•
				•			
							,

~	NOTE THAT THE PARTY OF THE PART	TOTAL	CRADELL LYADS
17-	MODATIONS	7SY	LVALLATUR

1	OPERATTON	AND	MATNITENANCE	PROBLEMS.	/DEFICIENCIES
1: •	CETTATITON		1 T 7 T 1 T T T T T T T T T T T T T T T		

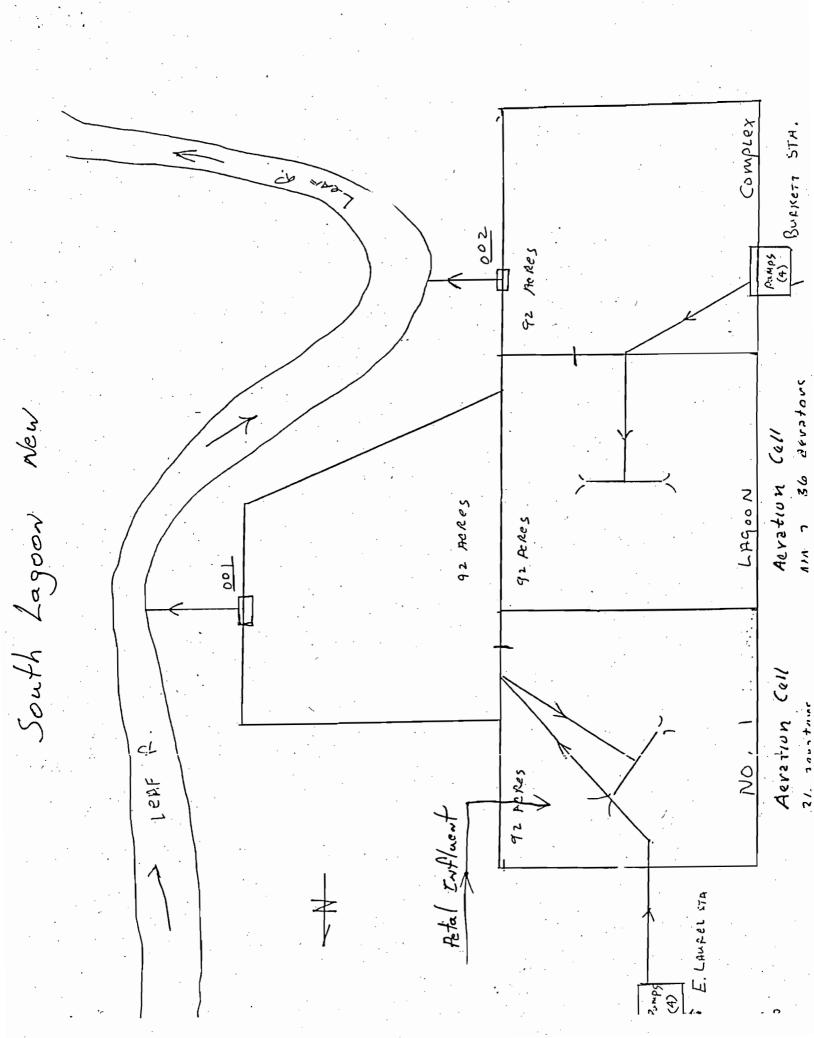
Check each of the following items in terms of their estimated adverse affect on the performance of the facility.

Item	Major	Minor	None	Item	Major	Minor	None
Staff Complement			_X_	Overloads (type):			
Personnel Training			_X_	Hydraulic			<u>X</u>
Operating Budget			<u>X</u>	Periodic			X
Laboratory Control		<u>.</u>	X_	Continuous			_X_
Instrumentation	·		<u>X</u>	Organic	<u> </u>	<u>X</u>	
Industrial Waste		X		Periodic		_X_	
Plant Obsolescence	.	_X_		Continuous		. — .	<u>X</u>
Equipment Failure:			<u>X</u>	Overload Cause(s):			
Treatment Processes		-	<u>X</u>	Infiltration		<u>X</u>	
Sludge Handling and Processing			Х	Combined Sewers			_X_
		 .		Industrial Growth			_X
Equipment Maintenance			_X_	Rapid Population Growth			_X_
Spare Parts Inventory		 ,	<u>X</u>	Increased Service Area	 .	_X_	
Power Failure			<u>X</u>	Other:			<u>X</u>
2. DESCRIBE BRIEFLY TH None	E MAJOR	PROBLEMS	INDICA	TED ABOVE (include follow-u	p actio	ns needeo	i)
						<u>.</u>	

•		•			
•					•
		,	•		
	•				
,				•	
					· · · · · · · · · · · · · · · · · · ·
	•				$(\mathbf{r}_{i,j}) = (\mathbf{r}_{i,j})_{i \in I}$
•			•		
				-	•
		•			•
					•
	•				•
•		•			•
•		·		•	
		•			
•		2		.21	
•					•
	•				•
		•			
•			•		
• •					
	•	•			
,					
	•				
				·	
•			٠.	•	
•		•			
					•
·			•	•	
·			•		
				·	•
	•				
		•		• •	,
				•	

3. GENERAL RATING			
Acceptable Conditional Acceptance Unacceptable	X		
Evaluation Performed By	Title	Organization	Date
Frrol White	Env. Scientist I	DEQ-OPC	10-19-93
Information Furnished By	Title	Organization	Date
Chuck Henderson	Division Manager for water & sewer	DEQ-OPC	10-19-93

	•
	•
	•
	· · · ·
)	
•	•



	,	* a			
)		
• • •					
				· · · · · · · · · · · · · · · · · · ·	
		\$ <u>.</u>			
		·			
			C		
					x
	, , , , , , , , , , , , , , , , , , , ,				
•					

7500-5 DATA FORMS

SOUTH REGIONAL OFFICE

FACILITY:_

South Lagoon Outfall 002

NPDES NUMBER: MS0020303

MONTH	FL	.OW	_	BOD			SS			AMMONIA 1	1.	FECAL	PH	<u> </u>	CL RE	SIDUAL
HONTH	AVG	HI	INF	EFF	%RED	INF	EFF	%RED	INF	EFF	%RED	COLI	MIN	MAX	MIN	MAX
Oct. 1992	3.04	3.9	854	39	95	194	*115	40.7	,				8.0	8.0		
Nov.	5.89	7.9	362	33	91	162	81	50					8.45	8.45		
Dec.	4.46	6.63	185	36	81	128	72	43.8					7.44	7.44		
Jan. 1993	7.44	9.17	88	18	80	54	21	61.1					6.83	6.83		
Feb.	3.72	6.04	218	20	91	106	18	83					6.98	6.98		
March	3.72	8.51	370	15	96	185	21	88.7					7.3	7.3		
April	5.66	9.17	512	44	91	137	. 40	70.8					9.44	*9.44		
Мау	3.21	4.39	250	45	82	223	88	60.5					9.59	*9.59		
June	3.20	7.24	730	18	98	307	79	74.3					8.88	*8.88		
July	6.02	7.86	-502	28	94	285	84	70.5					7.69	7.69		
August	5.71	9.5	532	21	96	330	82	75.2		, •° .	r martin		8.0	8.0		
Sept.	2.59	5.75	520	32	94	. 262	*105.5	59.7				**************************************	7.04	7.04		
AVERAGE	4.56	7.17	426.92	29.1	90.8	197.8	67.2	64.9			,		6.83	9.59		

COMMENTS: Exceeds permitted values.

,

WS0020303 South Lagoon Outfall 001

7500-5 DATA FORMS

SOUTH REGIONAL OFFICE

45.03 8.83 70t'2t 75.3 11.25 85.60T 78.5 90.9 1.73 95 ε.ε\1 16 7.402 7.71 81 6ε.1 9.04 05 .T. 48 7.5 9T 9.95 **LI.**6 86.4 €.08 7.7 8.90I Τ6 15 7.951 69.63 68.4 4.27 ٥ς 6.08I 76 77 6°77T ££.9 61.2 1.65 09 2.86 87¥ ٤٠٢9 7.56 68.4 79..2 ·98-TOT¥ 54.3 TS* 97 1.46 12.8 86.4 7.67 07 1.67 ٤8 77 6.77 98.7 95.2 2.89 82 I.88 ۷9 32 86 6.93 τ.4 8.84 7.7 Tτ ΙÞ¥ 97 6.54 12.8 97.9 ż۷ 33 6.711 78 22. 7.E9I 61.2 18.5 9.72 75 127,2 98 . ττ 64 4.4 ٦.٤ 30.3 77 103.3 LL 77 2.6II 1.2 69°T EEE INL ZKED EŁŁ INE ZKED ELL INE ΙH AVG SS ELOW N AINOMMA BOD

*Exceeds permitted values.

COMMENTS:

72.6

72.7

99.8*

68.7

72.e*

∠T.6*

£5.23

7.52

42.7

21.8

29.7

84.7

21.8

XAM

NIM

.0.α

XAM

CF KEZIDAVE

NIM

7.24

72.7

99.8

68.7

72.6

۲T.6

62.6

22.7

7.24

21.8

29.7

84.7

21.8

MIM

НА

COLL

FECAL

YBED

		•	
	•		
•			
•			
	•		
•			



STATE OF MISSISSIPPI

DEPARTMENT OF ENVIRONMENTAL QUALITY

JAMES 1. PALMER, JR. EXECUTIVE DIRECTOR

August 27, 1993

Honorable J. Ed Morgan, Mayor City of Hattiesburg P. O. Box 1898 Hattiesburg, MS 39403

Dear Mayor Morgan:

Re: DM

DMR/QA Study 13

NPDES Permit No. MS0020826

Early in 1993 you was sent a set of NPDES laboratory performance samples and requested to complete the analysis for those parameters requiring monitoring under the terms and conditions of your NPDES permit. The results of your analysis were sent to the Bionetics Corporation, Cincinnati, Ohio. Bionetics and they have informed us that the following results were outside the range of acceptability:

Parameter

Reported Value True Value Acceptance

Limits

Residual Chlorine 0.52 mg/1

 $0.24 \, \text{mg/l}$

.0866-.280 mg/l

This program is intended to help both you and the regulatory authorities determine where you may be having analytical problems. The above results in no way represent a violation of your permit limitations. However, we recommend that you review your analytical procedures for these parameters and notify our office by October 1, 1993 of the probable causes these parameters were outside the acceptable range. If you have any questions, please contact Mr. Phillip Bass, DMR QA State Coordinator, Mississippi Office of Pollution Control, phone 601-961-5143.

Sincerely,

Michael J. Freiman Municipal Permit Compliance Branch

MJF:glm

cc:

Mr. Al Herndon, EPA

Mr. Phillip Bass

THIS COPY FOR

,		
	taran da araba da araba da araba da araba da araba da araba da araba da araba da araba da araba da araba da ar	
•	·	
		,
•		
•		

DATE: 7/15/9

DMR-QA STUDY NUMBER 013

PERMITTEE: MS0020826	HATTIESBU	RG AERAT	ED LAGOON #2	CX	
ANALYTES					PERFORMANC EVALUATION
MISCELLANEOUS AN	ALYTES:				
PH-UNITS	6.10	6.10	5.96- 6.22	5.99- 6.19	ACCEPTAB
TOTAL SUSPENDED SOLIDS (IN MG/L)	30.5	33.0	24.0- 34.6	25.3- 33.2	ACCEPTAB:
DEMANDS IN MILLI	GRAMS PER	LITER:			
5-DAY BOD	21.0	21.8	11.8- 31.9	14.3- 29.4	ACCEPTABI
ADDITIONAL MISCE	LLANEOUS A	NALYTES:			
TOTAL RESIDUAL CHLORINE (IN MG/L)	0.52	0.240	.0866-0.280	0.112-0.254 но	T ACCEPTABI

PAGE 1 (LAST PAGE)

BASED UPON THEORETICAL CALCULATIONS, OR A REFERENCE VALUE WHEN NECESSARY.

S	• .		
		·	
		•	
•	·		
			·
	•	•	•
		•	
			•
•			•
		•	
•			
•			
•			
•			
		. •	
		•	•
		•	
	·		
,		•	
·			
			, ,
·			
	·		
	•	·.	
•	· ·		
	•		
•			•
	:	-	
			•
×			
		· . :	
	•		
•			
			e de la companya de la companya de la companya de la companya de la companya de la companya de la companya de
·		1	·
		1	



STATE OF MISSISSIPPI

DEPARTMENT OF ENVIRONMENTAL QUALITY

JAMES I. PALMER, JR. EXECUTIVE DIRECTOR

September 3, 1993

Honorable J. Ed Morgan, Mayor City of Hattiesburg P. O. Box 1898 Hattiesburg, MS 39403

Dear Mayor Morgan:



Re: Hattiesburg-North

Wastewater Treatment Facility NPDES Permit No. MS0020826

Compliance Sampling Inspection (3560/CSI)

Enclosed is a copy of the compliance inspection report and sampling that was performed at the above referenced facility on August 17, 1993 and August 23, 1993, respectively. The sampling results indicate that the effluent was not in compliance with your NPDES permit limits. The results of this inspection should be used by you as a guide for complying with requirements and limitations as stated by your NPDES permit.

The following violation was noted:

Parameter	Permit Requirement	Sample Results	Deviation
TSS	30 mg/l	36 mg/l	20%

If you have any questions concerning this matter, please contact us at 961-5171.

Respectfully.

Shannon E. Williams Municipal Permit Compliance Branch

SEW:glm Enclosures

cc:

Mr. Al Herndon, EPA (w/enclosures)

SRO

Mr. Paul Zetterholm (w/attachment)

THIS COPY FOR

. The state of th	
	· .
	•
	•
	\
	,
	•
	•
·	

		United States	Environmer	ital Protection Age	~~	_	Form Assessed	
Î ≙ E DA		W	ishington, D	. C. 20460			Form Approved	
SEPA NPDES Compliance Inspection Report							OMB No. 2040-0003 Approval Expires 7-31-85	
				nai Data Systen			Math Insp	
Transaction Code	NPD						6 5 10	
		8 2 6 ₁₁		mo/day 0 8 2 3 ₁₇	Inspection Type	Inspe	ector Fac Type Sched a	
49 450		0 2 0			18217	19_3	201 1	
	1) 1		Remarks) 				
			حنند					
Reserved Facility Evalua	tion Rating		Bt	QA '	Res	erved		
67 69 70 3		71	N :	72 N	73 74 75	\Box	80	
				Facility Data				
Name and Location of Facility	nspecte			. scincy Deta	Entry Time X A		Permit Effective Date	
HATTIESBURG -	-				10:00 X A	и 🗀 РМ	10/13/92	
HATTIESBURG, A					Exit Time/Date		Permit Expiration Date	
MATTIESBOKG, K					11:30		10/12/97	
Name(s) of On-Site Representative	re(s)		Title(s				Phone No(s)	
MR. CHUCK HEN		N		OPERAT	0R		545-4531	
							1	
							i .	
Name, Address of Responsible Of	ficial		Title					
HON. J. ED MOR	GAN			MAYOR				
P O BOX 1898			Phone	No.			Contacted	
HATTIESBURG, M	MS 39	403		545-4501			Yes 🔀 No	
		Section (: Areas E	valuated During	Inspection			
	(S :			-	ory, N = Not Evaluated)		
S Permit	S	Flow Measurem			reatment	S	Operations & Maintenance	
S Records/Reports	N	Laboratory			pliance Schedules	N	Sludge Disposal	
S Facility Site Peview	S	Effluent/Receiv	ing Waters		-Monitoring Program		Otnor:	
					additional sheets if n	ecessary)		
								
				,				
1		•					·	
l		•						
							:	
1							·	
						,	-	
		i						
	. '	•						
		•						
1								
		•						
·								
Namo(s) and Signature (s) of the			/O#: C	Telephone	_ 		Data	
Name(s) and Signature(s) of Inspe		•	-	lelephone		·. }	Date	
SHANNON WILLIA	MS	· · · · ·	OPC				8/23/93	
·				<u> </u>				
·							·	
	·					<u>.</u>		
Signature of Reviewer			y/Office				Date	
GLENN L. ODOM			OPC					
			<u> </u>				· ·	
			Regulator	y Office Use On				
Action Taken					Date		Compliance Status	
							Noncompliance	
1							Compliance	



NPDES COMPLIANCE INSPECTION REPORT

Date: August 23, 1993 Inspector: Thanno	~ MITTIAMS
. 2	
•	
PERMITTEE:	
itaties bung = North	<u> </u>
MAILING ADDRESS:	
City of Hattiesburg	
Po Box 1898	
Hattiesburg MS 39403	
BRIEF FACILITY DESCRIPTION:	
Aerated Lagoon	
J	

I. PERMIT CHECKLIST

- YES NO N/A 1. Correct name and mailing address of permittee.
- YES NO N/A 2. Facility is as described in permit.
- YES NO N/A 3. Notification has been given to EPA/State of new, different, increased discharges.
- YES N/A 4. Number and location of discharge points are as described in the permit.
- (YES) NO N/A 5. Name and location of receiving waters are correct.
- (YES) NO N/A 6. All discharges are permitted.
- YES NO N/A 7. All records required by permit are available for a minimum of three years.

•
•
•
•
•

					B. BOI	5 Test	Evaluation			
				1. 1	D.O. method use		a. Winkles b. D.O. Ps c. Other	r Titration robe		<u> </u>
				2.	If probe list o	alibra		i;		
						· .	a. Air b. Saturat c. Winkler			_
YES	NO	N/A		3. I	Holding time; <	48 hrs	S			-
YES	NO	N/A		4. I	Preservation; 4	degree	e C			
YES	NO	N/A		5.]	Incubation; 20	degree	С			
YES	NO	N/A		6. 8	Sample D.O. dep	letions	s; between	2 mg/1 and	6 mg/1	
YES	NO	N/A		7. E	Blank D.O. vari	ation;	< 0.2 mg/1	l		
		N/A N/A		ε	If effluent is a. Sample dechl b. Sample seede	orinate				
				C	C. Total Suspen	ded So	lids Test E	valuation	NA	
YES	NO	N/A	٠.	1. H	Nolding time; <	7 days	5			
YES	NO	N/A		2. 0	ven temperatur	e; 103	degree - 1	.05 degree (3	
YES	NO	N/A	:	3. B	Balance Calibra	ted. F	requency?		· · ·	<u>:</u>
YES	NO	N/A		4. B	alance Service	d at le	east yearly			
					D. Ammonia N	itroger	ı Test E va l	uation NÀ	-	
				1. M	lethod used;			• .		·
YES	NO	N/A		2. H	olding time; <	28 day	7 S			
YES	NO	Ņ/A		3. P	reservative; 4	degree	с, н ₂ so ₄	to pH < 2		
					E. Fecal Co	liform	Test Evalu	uation NA		
				1. M	ethod used;	a. MF b. MF		<u> </u>		

	•		
•			
•			
			•
•			
			•
		•	
	••		
,			
,			
	1 gr		
•			
•	•		• .
			•
	·		
	•		1.0
			•
•		• .	
	•		
•			
·			
0			
•		. A	
•			
• • .			
	,		
•			•
		•	
		• •	
•			
•	•	•	
			•
		•	

III. LABORATORY CHECKLIST

A. General NA

YES NO N/A 1. Written laboratory quality assurance manual is available.

B. Laboratory Procedures NA

- YES NO N/A 1. EPA approved analytical testing procedures are used.
- YES NO N/A 2. Standard Methods (lastest edition) is available.
- YES NO N/A 3. If alternate analytical procedures are used, proper approval has been obtained.
- YES NO N/A 4. Calibration and maintenance of instruments and equipment is satisfactory and records are adequate.
- YES NO N/A 5. Quality control procedures are used.
- YES NO N/A 6. Commercial laboratory is used

Name Done	er Analytical	1
Address		
Contact		<u>. · </u>
Phone	<u> </u>	

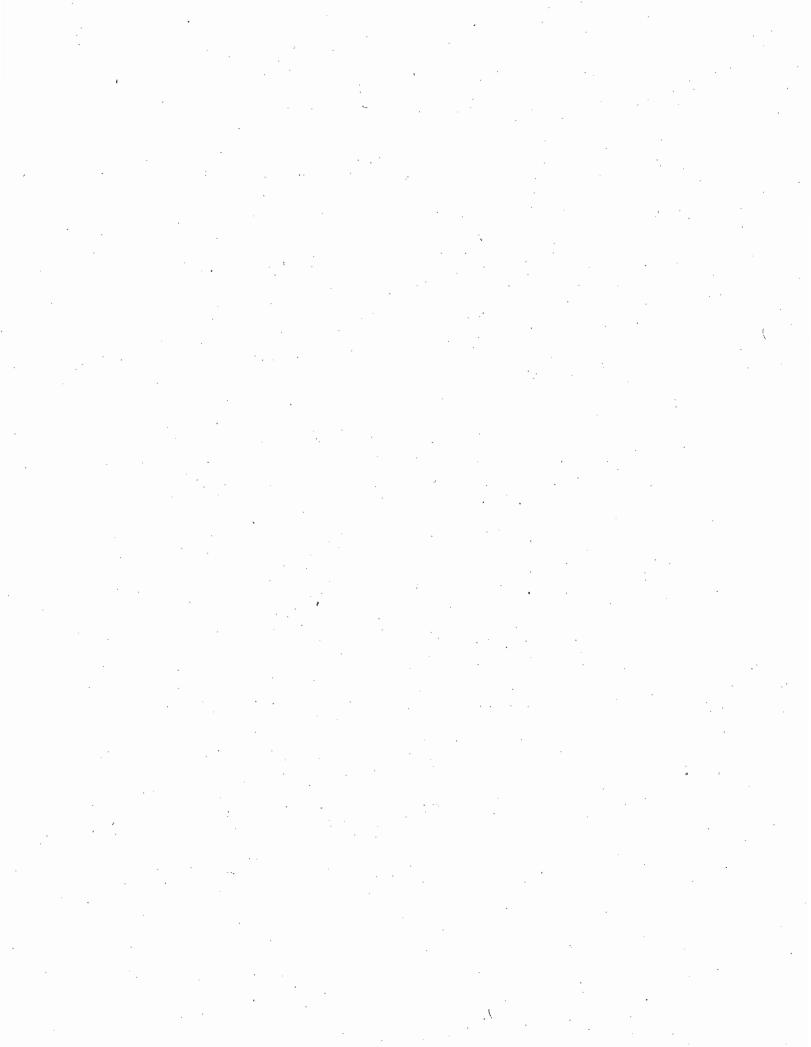
C. Laboratory Facilities and Equipment

- YES NO N/A 1. Proper grade distilled water is available for specific analysis.
- YES NO N/A 2. Fume hood has enough ventilation capacity.
- YES NO N/A 3. The laboratory has sufficient lighting.
 - YES NO N/A 4. Adequate electrical sources are available.



IV. FACILITY SITE REVIEW CHECKLIST

YES NO N/A	 Standby power or other equivalent provided. 	provision is
YES NO N/A	Adequate alarm system for power o is available.	r equipment failures
YES NO N/A	All treatment units, other than b service.	ack-up units, are in
YES NO N/A	 Procedures for facility operation exist. 	and maintenance \hat{j}
YES NO N/A	Organization plan (chart) for ope maintenance is provided.	ration and
YES NO N/A	6. Operating schedules are establish	ed.
YES NO N/A	7. Emergency plan for treatment cont	rol is established.
	Operating management control document include:	ments are current
YES NO N/A	a. Operating reportb. Work schedule	`
YES NO N/A	c. Activity report (time cards)	
YES NO N/A	9. Adequate number of qualified oper	ators are on-hand.
YES NO N/A	O. Established procedures are available operators.	ble for training new
YES NO N/A	 Adequate spare parts and supplies equipment specifications are main 	• •
YES NO N/A	 Instruction files are kept for ope of each item of major equipment. 	eration and maintenance
YES NO NA	3. Regulatory agency was notified of (Dates	by-passing)
YES NO NA	4. Hydraulic and/or/organic overloads Reasons for overloads	



V. SLUDGE DISPOSAL NA

	 Amount of sludge wasted daily from clarifier: a gallons/day
	b lbs/day (dry weight)
	Check the method(s) utilizing for sludge handling:
	a. aerobic digestion ()
	b. anaerobid digestion ()
	c. filter press ()
	d. drying bed ()
	e. sludge lagoon ()
	f. other ()
	3. If sludge is hauled offsite for ultimate disposal, what is the quantity and freguency of hauling? a. Quantity: tons b. Frequency: () daily () monthly
	LOCALION
res no n/A	4. If sludge is stored in an on-site lagoon or holding pond, has it ever been dredged or otherwise cleaned out? If so, when and where was the sludge disposed? When:
· . •	•
	Where:

			·	
	· ·			
·				•
				·
•				
	•			•
		·		
·				
	•			
				· · · · · · · · · · · · · · · · · · ·
•	:			
			÷	
	 . •			

C. Wiers

	1. Type of weir used: Rectangular
YES NO N/A	2. The weir is exactly level.
YES NO N/A	The weir plate is plumb and its top edges are sharp and clean.
YES NO N/A	4. There is free access for air below the nappe of the weir.
YES NO N/A	 Upstream channel of weir is straight for at least four times the depth of water level, and free from disturbing influences.
S NO N/A	 The stilling basin of the weir is of sufficient size and clear of debris.
YES NO N/A	7. Head measurements are properly made by facility personnel.
YES NO N/A	8. Proper flow tables are used by facility personnel.
	D. Flowmeter NA
	1. Type of flowmeter used:
	2. The most common problems experienced with the flowmeter:
	3. Measured Wastewater flow: mgd; Recorded flow: mgd; Error %
· · .	4. Design flow: mgd.
YES NO N/A	5. Flow totalizer is properly calibrated.
· .	6. Frequency of routine inspection by proper operator: /day.
	7. Frequency of maintenance inspections by plant personnel:/year.
	8. Frequency of flowmeter calibration:/month.
YES NO N/A	 Flowmeter adequate to handle expected ranges of flow rates.
YES NO N/A	10. Venturi meter is properly installed and calibrated.
YES NO N/A	11. Electromagnetic flowmeter is properly calibrated.

			•	·			
· ·							
	•	•		•			•
•							
•							
	· · ·						
			•			• •	
	* -			•			
		*				•	
		•			,		
		,			•		
					•		
					•		
						•	
	•	•					
	·			•	•		
		·					
					•		
			,				
	•		•		· ·		
						•	
		·					•
		•					
•							
							1 .
					;	-	
	•						
		•					
		•					
		· · .					
		•					
	•					•	•
		•		*1			,
:		•					
				-			
·							
					,		
				: *			
			*	•	•		
	•						
		·					
			•				
		•					
		•					
	•						
				·		•	
** :			·	I		•	
			•				

VIII. COMPLIANCE SCHEDULE STATUS REVIEW

- YES NO N/A 1. The permittee has obtained necessary approvals to begin construction.
- YES NO N/A 2. Financing arrangements are complete.
- YES NO N/A 3. Contracts for engineering services have been executed.
- YES NO N/A 4. Design plans and specifications have been completed.
- YES NO N/A 5. Construction has begun.
- YES NO N/A 6. Construction is on schedule.
- YES NO N/A 7. Equipment acquisition is on schedule.
- YES NO N/A 8. Construction has been completed.
- YES NO N/A 9. Start-up has begun.
- YES NO N/A 10. The permittee has requested an extension of time.
- YES NO N/A 11. The permittee has met compliance schedule.

•	•				t.
	•	· · · · · · · · · · · · · · · · · · ·	7		
			•		
	•				
					•
	-		•		
				•	
		•	· •	·	٠.
	.*				
					•
•					
				·	
		•			
					•
		• •			
				•	
	٠				,
	•				
•	•	· ·			
			, ·		
· 					
e					
	·			• .	
		• •	•	•	
•				·	
•			·		
•					
		•			
					,
		•			
	<i>t</i> :				
· ·					
		•			

BUREAU OF POLLUTION CONTROL SAMPLE REQUEST FORM

Lab Bench No. 1111

Ţ	GENERAL INFORMATIO	N: Facilit	v Name H	attiesb	urg Aera	ated Lag	oon (North)	
		300			NPDES	Permit No	20826	
	Discharge No.	001		-		ate Reque		
	Sample Point Ident				- .			
	Requested By <u>Com</u>	oliance Mo	nitoring	· · ·	D	ata To	Shannon Will	iame /
	Type of Sample:	Grab (Y) (omposite	(Flow)	Time s) Other	: ()	Tams k
	SAMPLE IDENTIFICAT		.opoo	,	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
	Environment Condit		~			Colle	cted By Erro	l White
	Where Taken eff							
	Type		meters		Preser	vative	Date	Time
	1. Grab	BOD,			cool		<u>8/17/93</u>	
	2. Grab	Fecal		.	cool		8/17/93	1200
	3.	rccu1			COOI		9/1///	
	4.		_					
	5.							<u> </u>
	FIELD:			_ ` —	·			
	Analysis	Compute	r Code	Request	Resu	lts .	Analyst	Date
	pH		400)	(X)		6	EW	$\frac{347}{17/93}$
	D.O.	•	300)	()			. <u> </u>	<u> </u>
	Temperature	•	010)	()				
	Residual Chlorine		060)	*(x)	0	25	EW	8/17/93
	Flow		060)	(X)		996	EW	8/17/93
	TRANSPORTATION OF			RO Vehicle		Other ()		OLILIA
v •	LABORATORY: Recei	ved By Ot				Date 8		Time 1300
٠.	Recorded By Sand	ly Hammons	<u> </u>		Date S	ent to St	ate Office 8/	31193
	Recorded by	Computer	4				<u> </u>	Date
	Analysis	Code	Request		Result		Analyst	Measure
		(000310)	(X)	15	.0	mg/1	KF.	<u>*************************************</u>
	BOD ₅	(000340)	()			mg/1	AF,	- 0/14/4
	TOC	(000680)	$\dot{}$			mg/1		
	Suspended Solids	(099000)	(x)	36	0	mg/1	KF	9/20/0
	TKN	(000625)	()			mg/1		8/20/9
	Ammonia-N	(000610)	()			mg/1		
	Fecal Coliform(1)		(x)	70	olonies/		DR .	3 /17/9
	Fecal Coliform(2)		$\tilde{(}$		olonies/		DR	- */1//9
	Total Phosphorus	(000665)	Ò			mg/l	•	<u> </u>
	Oil and Grease(1)	• •	65	_	,	mg/1	•	-
	Oil and Grease(2)		$\dot{}$			mg/1		
	Chlorides	(099016)	7			11g/1		
	Phenol	(032730)	23			mg/1		-
	rnenoi Total Chromium	(001034)) (mg/1		-
	Hex. Chromium	(001034)	\sim		-	mg/1		
	Zinc	(001032)				mg/1	· · · · · · · · · · · · · · · · · · ·	-
		(001042)			,	mg/1	<u> </u>	
	Copper Lead	(001042)				mg/1		
		(017301)					.	
٠., '	Cyanide	(000722)	()			mg/l		
•			()		·	. .		-
-			()			<u> </u>		
-							t i medicalistic in	
			()		,	 , .	OFD.	
-			. ()				SEP -	۷ ۱۹۶۵
	· · · · · · · · · · · · · · · · · · ·							
	·		()				The second second	<u> </u>
	·		. ()				1 - Direct	
	<u> </u>		()			<u>. </u>	· · · · · · · · · · · · · · · · · · ·	<u> </u>
	·		()			<u> </u>		
	Remarks *Test pe	erformed i	n my pre	sence by	operat	or on a	Lamotte O/	
			1.		_			test.

		•		•	
·		•			e de la companya del companya de la companya del companya de la co
•	•				
	:				
÷					•
. •					•
, '				1 4.	
		•			,
		•			
,	•				•
					**
			•	• .	
			·	•	
	•			•	
	•				
	•				
•			•		
		•			
•					
				÷	
		•	•		
					• .
			.•		•
	<i>;</i>	•			•
			•		
	•			·	
				· · · · · · · · · · · · · · · · · · ·	
			- '		•
					•
•				•	•
		•		. '	
		•			
	•				
		. •			
	• .			•	•
	. •				-
		, v			
* .					
					•
	•				•
			· .		



STATE OF MISSISSIPPI

DEPARTMENT OF ENVIRONMENTAL QUALITY JAMES I. PALMER, JR. EXECUTIVE DIRECTOR

December 23, 1992

Honorable J. Ed Morgan, Mayor City of Hattiesburg P. O. Box 1898 Hattiesburg, MS 39403

Dear Mayor Morgan:

Re: Hattiesburg Wastewater Treatment Facility NPDES Permit No. MS0020826 Compliance Sampling Inspection (7500/CSI)

Enclosed is a copy of the compliance inspection report and sampling that was performed at the above referenced facility on October 19, 1992. The sampling results indicate that the effluent was not in compliance with your NPDES permit limits. The results of this inspection should be used by you as a guide for complying with requirements and limitations as stated by your NPDES permit.

The following violation is noted:

<u>Parameter</u>	Permit <u>Requirement</u>	Sample <u>Results</u>	<u>Deviation</u>
Fecal Coliform	200 col./100 ml	500 col./100 ml	300 col./100 ml

A review of plant performance for the past 12 months shows the following violation:

Residual 1.0 mg/l 1.5 mg/l (Maximum) 0.5 mg/l Chlorine

-	
•	
•	
•	
	•
·	
•	
•	
•	
•	
•	

If you have any questions concerning this matter, please contact us at 961-5171.

Respectfully,

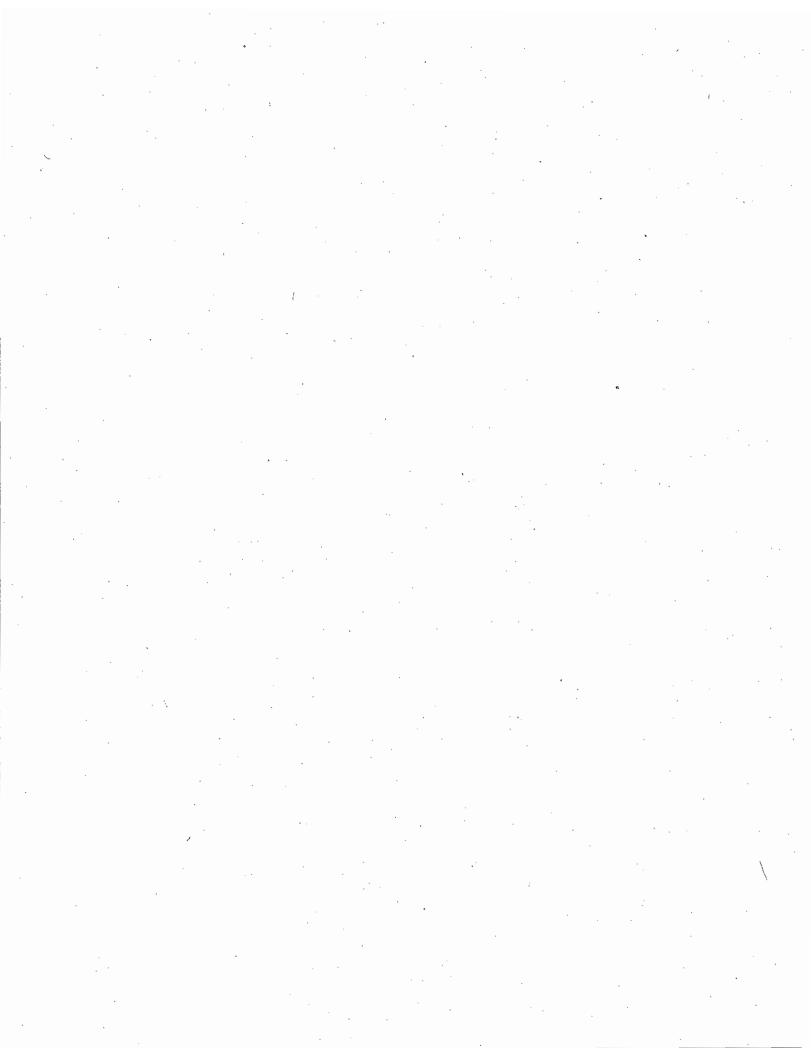
Shannon E. Williams Municipal Permit Compliance Branch

SEW:dam Enclosures

cc: Mr. Pete McGarry, EPA (w/enclosure)

SRO

Mr. Paul Zetterholm (w/attachment)



Mississippi Department of Environmental Quality Office of Pollution Control

Date of Inspection

Form 7500

Sample Taken

REPORT ON OPERATION AND MAINTENANCE OF WASTEWATER TREATMENT FACILITY

Minor infiltration reported.

10-19-92

X Yes ___ No

		A. GENERAL INI	FORMATION	
1.	Facility Hattiesburg No	orth Lagoon Complex #2		
(a.) Name	(b.) Owner		(c.) Location
1	North Lagoon	City of Hattiesburg	Hatti	City Halliesburg, MS, Forrest Cou
2.	Type of Facility	3. Avg. Design		4. Design Population
	Aerated Lagoon	2.0 MGD		20,000
5.	Collection System	6. Date Present	Facility Began	Operating 7. Permit N
	Combined SeparateX Both	1974 Origin 1987 Addit	nal date ion of aeration o	cell MS0020826
8.	In the Space Provided Belo of the Facility Units in I		l Flow Diagram or	a Written Description
	See attached s	sheet		
· ;				
9.	Identify Receiving Waters Bowie River			
٠.		B. CURRENT FACT	LITY LOADING	
1.	Annual Avg. Daily Fow Rate	e (mgd) 2. Peak Fl	low Rate (mgd)	3. Population Served
	1.26 MGD	Dry Weather 0.996	Wet Weather 1.800	8,000
4.	Annual Avg. BOD5 of Raw Se	ewage (mg/1)	5. Annual Avg. Sewage (mg/	Suspended Solid of Raw (1)
	134.3	<u> </u>	<u>. </u>	130.8
6.	Principal Types of Industr Discharged to Municipal Sy		7. Population Industrial	Equivalent (BOD) of Wastes
	Cardboard Manufacturing Pl	ant	Unknow	vn
8.	Population Equivalent (SS Industrial Wastes) of	9. Volume of 1	Industrial Wastes (mgd)
	Unknown		Unkno	own
10.	Infiltration Problems			



C. FACILITY. PERFORMANCE

1.

LABORATORY ANALYSIS (a) Reporting Period

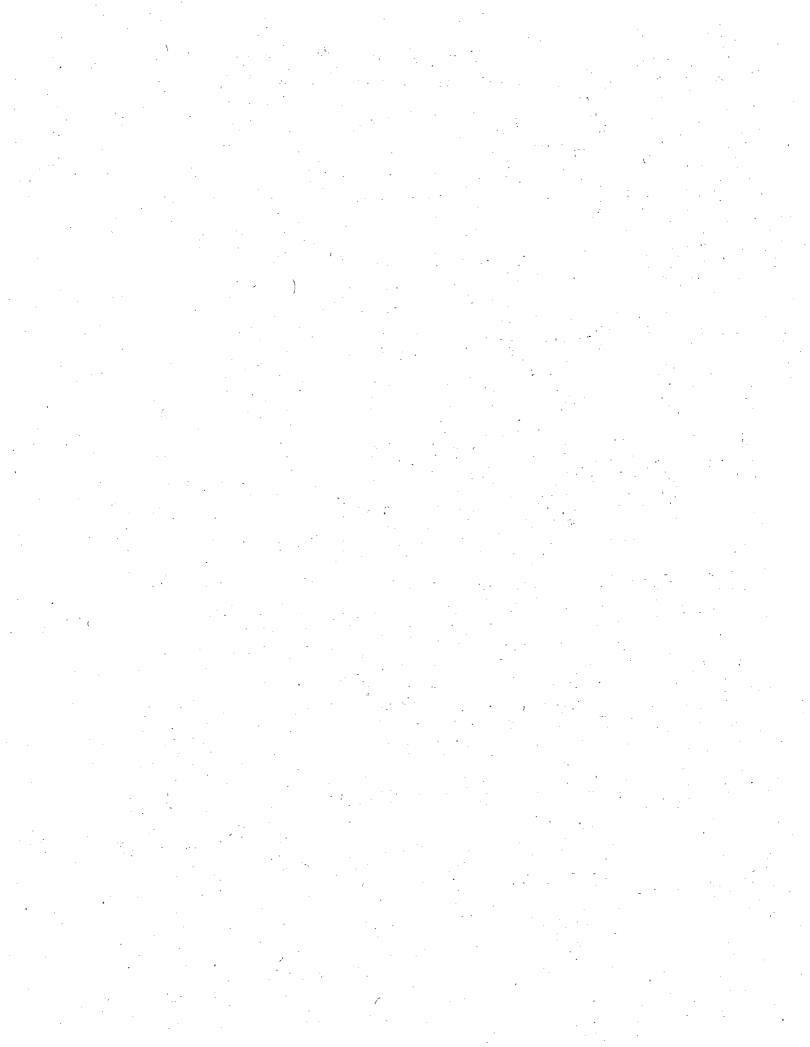
From	(Month, Year) October	r 1991	То	(Month, Year) Sept	ember 1992
	Parameter (b)	Actual Facility Performance Data (c)	Facility Design Data (d)	NPDES Permit Requirements (e)	Facility Complies With Permit (g)
(1)	Flow (mgd) (monthly avg.)	1.26	2.0	2.0	Circle One Yes No
(2)	Peak Flow (mgd) (maximum day)	1.83			Yes No
(3)	Suspended Solids (monthly avg.) Influent (mg/1)	130.8			Yes No
	Effluent (mg/1)	11.8		30	Yes No
	% Removal	91%			Yes No
(4)	BOD5 (mo. avg.) Influent (mg/1)	134.3			Yes No
	Effluent (mg/1)	8.9		30	Yes No
	% Removal	93%			Yes No
(5)	Dissolved Oxygen Effluent (mg/l) Minimum				Yes No
(6)	Chlorine Residual Effluent (mg/l) Maximum	1.5	· .	0.1-1.0	Yes No
(7)	Fecal Coliform (per 100 ml) Geometric Mean May - October	ے 20		200	Yes No
	Nov April	∠ 20		200	(Yes No
(8)	pH Range Effluent Minimum	6.8		6.0	Yes No
	Maximum	7.7		8.5	Yes No
(9)	Ammonia Nitrogen (monthly avg.) Influent (mg/1)				Yes No
	Effluent (mg/1)				Yes No

			•	•
		•		•
				•
			•	
				r
	· V			
			·	
	•			
		• .		
·				
,	·			•
	· .			
			, ,	
			,	
			;	
		•		
•				•
			•	
•	·			
			•	v.
	••	•	٠	
		•		
		•		
			•	
				,
•			•	
	•			
		•		
				•
		•		
		. •	•	
			,	
•	A Company of the Comp		•	

2. FACILITY RECORDS	
Are Discharge Monitoring Reports filed with DE	Q/OPC? X Yes No
3. DOES FACILITY HAVE ALTERNATE POWER SOURCE? 4.	ADEQUATE ALARM SYSTEM FOR POWER OR EQUIPMENT FAILURES?
Dual Feed <u>X</u> Generator <u>None</u> None	X Yes No
5. EQUIPMENT PROGRAM Adequate Inadequate	6. IS FACILITY EFFLUENT 7. IS FACILIT BEING CHLORINATED? EFFLUENT
(a.) Routine Maintenance Schedules X	BEING DE- CHLORINATE
(b.) Records of Maintenance Repairs & Replacement X	Yes Yes No
(c.) Spare Parts Inventory X	
8. DOES SEWAGE BYPASS FACILITY IN WET WEATHER? No	9. DOES SEWAGE BYPASS FACILITY IN DRY WEATHER?
10. IS THE DEQ/OPC BEING NOTIFIED OF EACH BYPASS?	11. BYPASS FREQUENCY (monthly)
N/A	N/A
12. AVG. DURATION OF BYPASS (hrs) N/A	13. REASON FOR BYPASSING N/A
14. CAN BYPASS SEWAGE BE CHLORINATED?	15. DO SEWER OVERFLOWS OCCUR UPSTREAM OF FACILITY?
_X_YesNo	Yes <u>X</u> No
16. REASON FOR OVERFLOWS	17. ANY ODOR COMPLAINTS BEYOND FACILITY PROPERTY? (If yes, explain)
N/A	No
18. OBSERVED APPEARANCE OF EFFLUENT, RECEIVING STRE	AM OR DRAINAGE WAY
Clear effluent with slight green tint, no not	iceable discoloration of river.



19. DO OPERATORS AND OTHER PERSONNEL ROUTINELY ATTEND SHORT COURSES, SCHOOL OR OTHER TRAINING? X Yes No (a.) If yes, cite course sponsor, and	. IS LAB TESTING ADEQUATE FOR THE CONTROL REQUIRED FOR THIS SIZE ATTYPE OF FACILITY AND USES OF RECEIVING WATERS?	CONTROL REQUIRED FOR THIS SIZE AND TYPE OF FACILITY AND USES OF				
date of last course.	X Yes No (If no, explain	n)				
OPC sponsored workshop Sept. 1992	105 NO (11 NO, explain	.,				
(b.) If no, are there any courses available in this area?						
(c.) Is there an established procedure for training new operators?						
On-job-training						
on-job-training						
21. EXPLAIN MAIN DIFFICULTY EXPERIENCED WITH INDUSTRIAL	WASTES					
21. EAFLAIN HAIN DIFFICOUIT EAFERIENCED WITH INDUSTRIAL	MADIES					
None						
22. PERMANENT RECORD FILE						
(b.) As built plans and specifications?(c.) Manufacturers operation and maintenance specifications.(d.) Flow charts?	<u>X</u> Yes No					
23. ANNUAL BUDGET FOR MAINTAINING AND OPERATING FACILITY	Y Note #2					
Salaries & Wages Electricity Chemicals Maintenance S	Staffing & Training Other Total	1				
117,600 190,000 10,000 45,000	1,000 46,400 410,0	000				
24. STABILIZATION PONDS						
(a.) Weeds cut and vegetation growth in ponds remove	ed? (b.) Banks and dikes maintaine (erosion, etc.)	ed?				
X Yes No	X Yes No					
(c.) Any reports of ground water contamination from	pond? (If yes, give details)	Total 410,000 ntained?				
Yes <u>X</u> No						
165 NO						
(d.) Seepage reported? (e.) Adequate depth contro	ol? (f.) Efflunet release is					
Yes <u>X</u> No <u>X</u> Yes No	X Continuous Intermittent Seasonal					



D. LABORATORY CONTROL

CODING INSTRUCTION

Enter test codes opposite appropriate items. If any of the below tests are used to monitor industrial wastes, place an "X" in addition to the test code.

1 - 7 or more per week

3 - 1, 2 or 3 per week 5 - 2 or 3 per month

7 - Quarterly

2 - 4, 5 or 6 per week 4 - as required

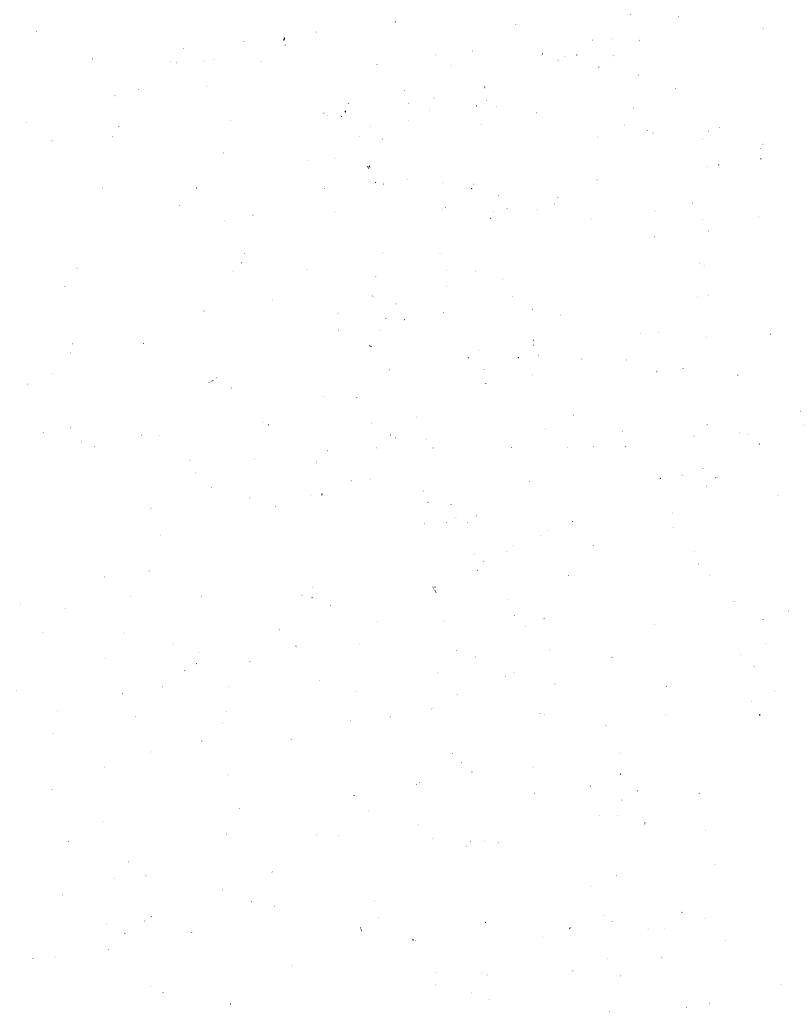
Comments

6 - 1 per month

8 - Semi-Annual

9 - Annually

					(e.)	Sludge	· · ·	. :
	Item (a.)	Raw (b.)	Mixed Liquor (c.)	Final (d.)	Raw	Super- natant	Digester (f.)	Receiving Stream (g.)
l. ·	BOD or CBOD	6		6				
2.	Suspended Solids	6		6				·
3.	Settleable Solids							
4.	Dissolved Oxygen					. 7 . 7		
5.	Total Solids				٠.			·
6.	Volatile Solids							
7.	рН			6				
8.	Fecal Coliform			6				
9.	Residual Chlorine	,		3				
10.	Flow			. 3			·	
11.	Ammonia Nitrogen							
12.								
13.								



		E. FACILITY P	ERSONNEL IN	VENTORY		
Per	sonnel Classification (a.)		Employme (b.)	nt		
	The second of the second of the second of the second of the second of the second of the second of the second of	Acti	ıal			
		Man-Hours Per Week	Number	Number Budgeted		f Certificati nd Number
ι.	Management/Supervisor	30	.75	•75	Class 3	3, 0690
2.	Certified Operator in Charge	40	1.00	1.00	Class 1	, 0032
3.	Laboratory			ı	Class 3	3, 0589
4 •	Maintenance	20	.50	.50	-	
5.	Other Facility Workers	120	3.00	3.00		
5.	Other Office/Clerical					
7.	Total	210	5.25	5.25	· ·	· · · · · · · · · · · · · · · · · · ·
	F. GUID	E - VISUAL OBS	SERVATION -	UNIT PROCESS	<u>`</u>	· .
Rat	ing Codes: S = Satisfactory; OUT = Out of Operation		actory; M =	Marginal; IN	= In Ope	ration;
		Condition	on or Appear	rance	Comm	ents
			Kating	•		
ı.	GENERAL					
l.	GENERAL		S			
	· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·			
Bui	vunds		S			

۷.	PKELIMINA	IM
----	-----------	----

Overflows

Maintenance of Collection Systems

S

N/A

Pump Station

·S

		•			
		• , •			
).			•		
	- *			•	
			,		
٠					
	· '				
	•				
					4
			the state of		
				. ,	
			•		
		•			
		,		. *	
•	1	•			
		\			
				. ,	
			•		
	•				
•					
		i.		•	
			•		
		•	e e e e e e		
		• •			
				•	
•					
	· · · · · · · · · · · · · · · · · · ·			. \	
•					
		•	•		
	•		•		*,
				. 4	`
	•	,			
,		•			•
		4			
			•		
.*			• • •		**
	•			,	/
	•	the state of the s			

	Condition or Appearance Rating	Comments
2. PRELIMINARY (CONT.)		
Ventilation	S	
Bar Screen	N/A	
Disposal of Screenings	N/A	
Comminutor	N/A	
Grit Chamber	N/A	
Disposal of Grit	N/A	
3. PRIMARY		
Settling Tanks	N/A	
Scum Removal	N/A	
Sludge Removal	N/A	
Effluent	N/A	
4. SLUDGE DISPOSAL		
Digesters	N/A	
Temperature and pH	N/A	
Gas Production	N/A	
Heating Equipment	N/A	
Sludge Pumps	N/A	,
Drying Beds	N/A	
Vacuum Filter	N/A	
Incineration	N/A	
Disposal of Sludge	N/A	

.

· · · · · · · · · · · · · · · · · · ·
•

	Condition or Appearance Rating	Comments
5. OTHER		
Flow Meter and Recorder	N/A	Instantaneous reading
Records	S	of effluent
Lab Controls	S	
Fence	М	
6. SECONDARY-TERTIARY (List items as required)		
Aeration Cell No. 1	S	One of four aerators under
Aeration Cell No. 2	s	repair in each aeration cell
Polishing Pond	S	
· 	·	· · · · · · · · · · · · · · · · · · ·
7. CHLORINE		
Effluent	S	
Chlorinators	S	
Effective Dosage	S	
Contact Time	S	
Contact Tank	S	
Dechlorination	N/A	

(



~	NOMAME	ONIG DI	U 1777A1	ተተል ጥረነው
li.	NOTATI	UNS B	L EVAL	JUATUK

_	ODED A MITON	AND	MATHERNANCE	DRODERVA (DERTATEVA	TEC
1.	OPERATION	AND	MAINTENANCE	PROBLEMS/DEFICIENO	TEO

Check each of the following items in terms of their estimated adverse affect on the performance of the facility.

Item	Major	Minor	None	Item	Major	Minor	Nor
Staff Complement			X	Overloads (type)			
Personnel Training			X	Hydraulic		,	
Operating Budget			X	Periodic			2
Laboratory Control			X	Continuous			3
Instrumentation			X	Organic			}
Industrial Waste	 -		X	Periodic			X.
Plant Obsolesence			X	Continuous			X
Equipment Failure:				Overload Cause(s):			
Treatment Processes			X	Infiltration		Х	
Sludge Handling				Combined Sewers			X
and Processing			, X	Industrial Growth			X
Equipment Maintenance			X	Rapid Population Growt	h		X
Spare Parts Inventory			X	Increased Service Area	1		X
Power Failure			X	Other:		<u> </u>	X
	_			Other:			

2. DESCRIBE BRIEFLY THE MAJOR PROBLEMS INDICATED ABOVE (include follow-up actions needed)

None

3.	GENERAL	RATING
----	---------	--------

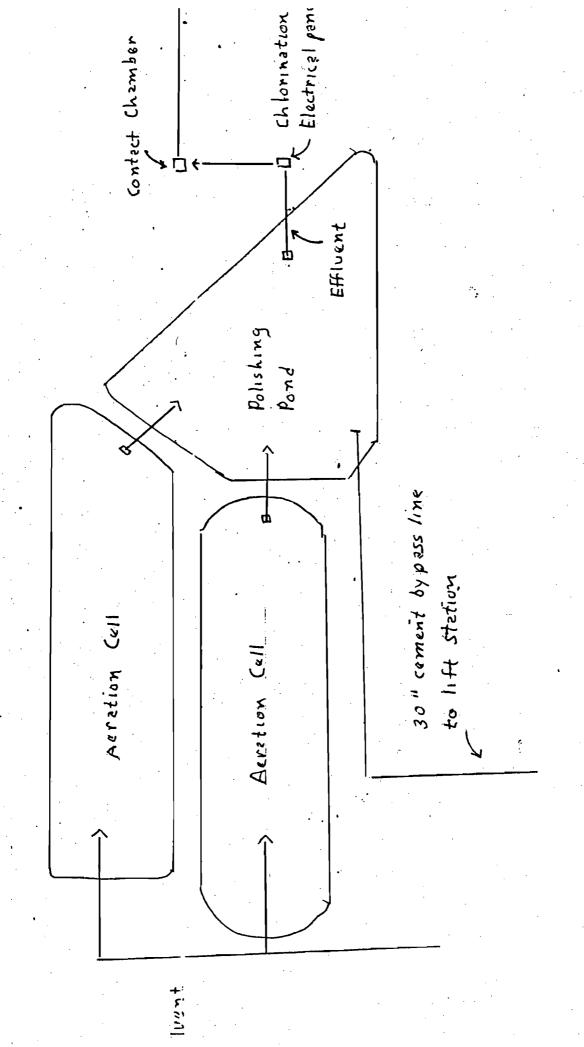
Acceptable	X
Conditional Acceptance	
Unacceptable	

ı	

Evaluation Performed By	Title	Organization	Date
MICHAEL EGAN ()	ENVIRONMENTAL TECHNICIAN	OFFICE OF N, SR. POLLUTION CONTROL	10-19-92
Information Furnished By	Title	Organization	Date
CHUCK HENDERSON	DIVISION MANAGER FOR WATER AND SEWER	CITY OF HATTIESBURG	10-19-92

- Note #1 Generator located in lift station house on lagoon grounds supplies power only to lift station pumps not to aerators.
- Note #2 Budget refers to expenditures projected for both lagoon systems Complex #1 and Complex #2.
- Note #3 Man hours refer to personnel who divide time between water and sewer departments.

		•				
			· ·			
• .						
					•	
·						
			<i>i</i>		•	
			•			
	•				•	
			•		•	
	·					
•				•		
		•		Ę		
•				(
	•			•	•	
					•	
		•				
			•		*	
	•					
				•		
		,	٠			
			ı			
			•		•	
			•		. /	
		,				
	2					
			•			
•	•	•			·	
·						
				•	•	
·	•	•				
	1				•	
			•			
	•			* • •	,	
	•		•			
•						
	_	•				
•	•					
				•		
•			•		•	
•						
					•	
			•			
		•			•	
•	•	·				
:					•	
			• • •			
		•		•		
	•					
			.*	•	a de la companya de la companya de la companya de la companya de la companya de la companya de la companya de	



•	
•	
• •	
•	
•	
·	
•	
	·
·	
·	
	•

FACILITY: Hattiesburg Lagoon Complex #2

NPDES NUMBER: MS0020826

							COMMENTS:	COM	•
	91%	11.8	130.8	286	8.9	134.3	. 1:83	1.26	VERAGE
	88.1	8	67	96.6	5	147	1.27	1.216	Sept.
	97	9	301	95.9	&	195	1.37	1.225	August
	86	12	84	91	10	113	1.21	1.098	July
	95	7	134	96	9	219	1.21	1.21	June
÷.	88	18	144	81	26	140	1.21	1.21	Мау
	92	&	100	98	ω	144	1.37	1.262	April
	78	15	68	82	7	39	1.53	1.495	March
	67	16	48	83	7	40	1.8	1.725	Feb.
	92	15.4	198	. 87	10.1	78	1.83	1.574	Jan. 91
	89	12.3	108	94	10.6	191	1.37	1.262	Dec.
	94	12.2	193	96	7.5	210	.996	0.874	Nov.
	93	8.6	124	96	3.6	96	1.07	0.929	Oct. 91
INI	%RED	EFF	INF	%RED	HFF	INF	Ħ·	AVG	LIONILI
		SS			вор		MO	FLOW	MONTH

	,							. ,				
						•						
		•		,		• .						
•		٠.									,	
		• •										
								. •				
							•					
		•							•			
							•					
		,					• .					
•				:								
			•	•							`.	
									•			
							٠.					,
		,										
•												
							•					
		•			-							
						• .	. •					
* •					•			•				
										١.		
•					•							,
					. :							
										•		
						;						
· •		,										
									.,			
							:					
							•					
							-					
					•							

	•						
I.	GENERAL INFORMATION	ON: Facil	ity Name	<u>Hattı</u>	esburg Aerated	Lagoon	
	County Code	0800			NPDES Permit No		
	Discharge No.	001		.	_ Date Reque	ested	
	Sample Point Iden	tification			Data To		546
	Requested By	Compli	lance Moni	Tioning			ton sec
	Type of Sample:		Composite	(Flow)	(limex) Other	· ()	
II.	SAMPLE IDENTIFICA		_		0-11		
	Environment Condi				Colle	ected by M.Egan	
	Where Taken			ollowing	chlorination	- Dete	m.t
	Type		rameters		Preservative	<u>Date</u>	<u>Time</u>
	1. Composite	BOD, S	SS		Cool		1220
	2. Grab	<u>Fecal</u>		_	Cool	10/20/92	1220
	3				·	_	
	4.						
	5	·				'	
III.	FIELD:	÷	. 0-1-	D = =====	D14	A	D
,	Analysis		ter Code		Results	Analyst	Date
	pH		00400)	(x)	7.1/7.2	ME	10/19-20/9
	D.O.		00300)	()			
:	Temperature		00010)	()		··	10/10 00/10
	Residual Chlorine	•	50060)	(X)	0.51/0.39	ME	10/19-20/9
	Flow		74060)	(x)	0.996 MGD	ME	10/20/9
	TRANSPORTATION OF					30/03/00	T4 3000
٧.	LABORATORY: Rece					10/21/92	
	Recorded By		<u>ly Lewis</u>		Date Sent to St	ate office	2-1-92
		Computer	D		Dag.,14	A 1 A	Date
	Analysis	Code	Request		Result	Analyst	Measured
	BOD ₅	(000310)	(x)	8.0	mg/1	DS	10/22/9
	COD	(000340)	()		mg/1		
	TOC	(000680)	()	.—	mg/1		
	Suspended Solids		(x)	<u> </u>		DE	10/26/9
	TKN	(000625)	()		mg/1		
	Ammonia-N	(000610)	()		mg/1		<u> </u>
	Fecal Coliform(1)		(X)		olonies/100 ml	LH	10/20/9
	Fecal Coliform(2)		()		olonies/100 ml		<u>*</u>
	Total Phosphorus		()		mg/1	•	
	Oil and Grease(1)		()		mg/1		
	Oil and Grease(2)		()				
	Chlorides	(099016)	()		ing/1		
	Phenol	(032730)	() .		mg/1		Þ.
	Total Chromium	(001034)	()		mg/1		
	Hex. Chromium	(001032)	()		mg/1		· ·
	Zinc	(001092)	. ()		mg/1		·
	Copper	(001042)	()		mg/1		- -
	Lead	(017501)	()	·	mg/1		·
	Cyanide	(000722)	()		mg/1		
			()				
			()				• •
			()				
		·	()				
	· · · · · · · · · · · · · · · · · · ·		()				
			()			<u> </u>	
			()			<u> </u>	
			()			DEC - 2 1992	
			()				•
			()				
	Remarks		•	,	<u> </u>		
	· · · · · · · · · · · · · · · · · · ·						

*Date of Test Initiation

	·				
•					
		~			
•					
			•		
•					
	•				
•					
		·			
		· .			
					•
			,		
			•		
		• .			•
	•				
				•	•
	•				
	•				•
0			•		
		•			
·					
•					
					•

SEPA NPDES C		ington, D. C.		A LAGOR				ı	B.No. 2040-0003
WEPA NPDES C	omplia	ince li	nspe	ectio	n Re	port			roval Expires 7-31-85
· · · · · · · · · · · · · · · · · · ·		: National		_				. 41	Knth Insp
Transaction Code NPDES			/day	,		tion Type	· Insn	ector	Fac Type Sched'd
1 N 2 5 3 M S 0 0 2 0 8 2		9 2 0		17	18		19 S		201 [][[]
	F	Remarks				111		Ш	
Reserved Facility Evaluation Rating	ВI 71 N		DA N	73	74	Resei	ved		 80
	Sec	tion B: Fac	cility Da	ıta					
Name and Location of Facility Inspected					Entry Tim	ne X AAA	☐ PM	P	ermit Effective Date
Hattiesburg Aerated Lagoon					9:55	<u> </u>		_	1/26/88
Hattiesburg, MS	:				Exit Time	e/Date		P	ermit Expiration Date 1/25/93
Name(s) of On-Site Representative(s)		Title(s)						Pi	hone No(s)
Mr. Charles Henderson		Ope	erator	•				- 1	545-4531
<u> </u>									
Name, Address of Responsible Official		Title	-						
Hon. J. Ed Morgan		May							
City Hall Hattiesburg, MS		Phone No	0.						Contacted Yes X No
	Section C: A	reas Evalu	uated D	uring In	spection				163 23 110
	actory, M = M					Evaluated)			
	Measuremen	1	N	Pretrea	tment		S	Оре	rations & Maintenance
S Records/Reports N Labora			N		ance Sche		N	Sluc	dge Disposal
	nt/Receiving		<u> s </u>		nnitoring f			ימיני 🚶	<u> </u>
Section D: Summ	ary of Findin	gs/Comm	ents (A	ttach ad	ditional sh	eets if nec	essary)		
	• •							,	
			:		•				
(See Attached L	etter)								
(See Attached 1	,								
					•	•			
						•			1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
		} .							
	•					(
			, ,	•					
		•	•						
						:			
Name (a) and Single (a) of language	14	200 - 07 1	 _		<u> </u>				·
Name(s) and Signature(s) of Inspector(s)	Agency/0	Office/Tele						Date	0.40+.400
Shannon Williams		OPC	<u> </u>						8/24/92
S. William						·			
Signature of Reviewer	Agency/(Office				- <u>-</u>		Date	
Glenn L. Odom		OPC	<u> </u>						
	<u> </u>	udota=: C	Hina II	0.0=1::					
Action Taken	Heg	ulatory Of	nice Us	a Only	Dat	e	· .	Com	pliance Status
					l Dat				Noncompliance
									Compliance

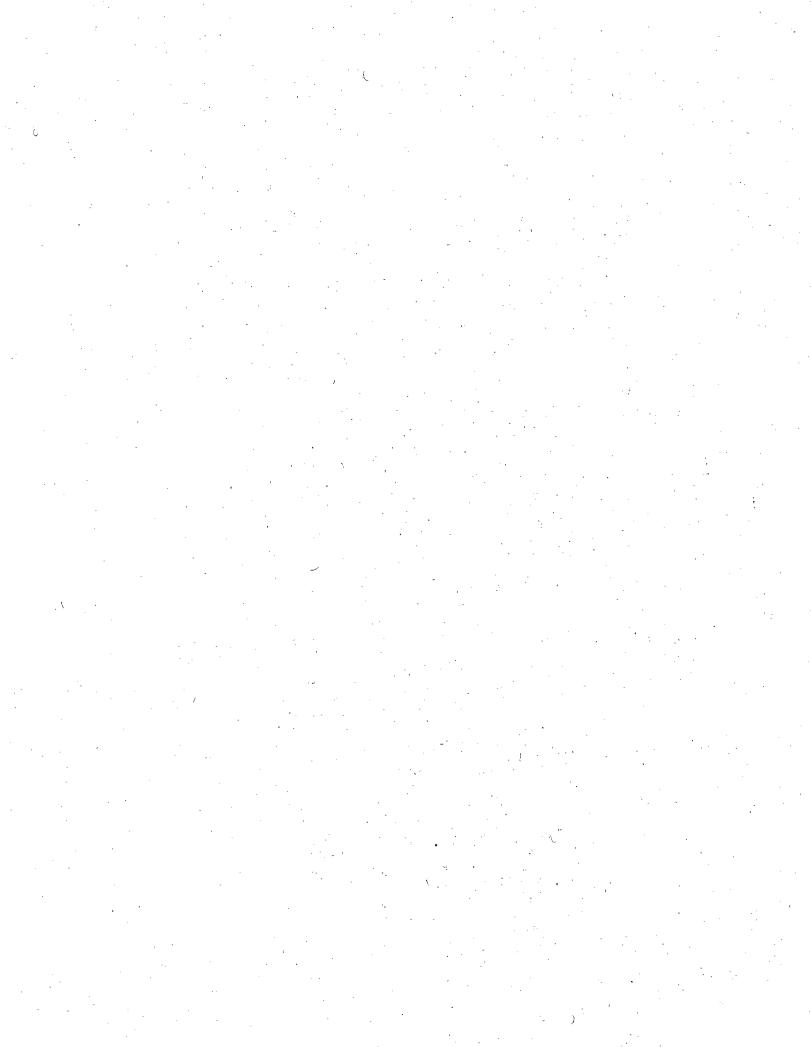
EPA Form 3560-3 (Rev. 3-85) Previous editions are obsolete.

					•		
•				•			
					· ·		
•			•				
4 - 1							
•						•	
	•						
				$(1, \dots, 1, \dots, 1)$			
•							
	+ 1. + .						
			,	•			
		•					
			•				
				•			
			•	•			
						· · · ·	
				· ·	•		
>			•		•		
	•				i.		
						. .	
			•				
					;		
	•		•	•			
	,			•			
• •							
	,		•		:		
•							
				• .			
, .							
			. ,	\ <u>'</u>			
	•						
				•		·	
•		•		•			
						•	
						,	
					, ,		
	`		•				
			,				
				•	•		
•	•				•		
•					• • • •	•	
•				· · .			
		·	•		,		•
	•						
			•	•			
	: ·	•		.'			
				•	•		
					A Company of the Company	*	
					•		
•							

NPDES COMPLIANCE INSPECTION REPORT

Inspector: <u>Scannor</u>

		PEI	RMITTEE:			
·	2	F Harrisbu	ra MSODZ	1032le .		
: :		MAILIN	NG ADDRESS:			
· ·	· ·	<u> </u>	5 <u>4 1343 </u>			
<u> </u>	,	1+0+1==	cura Mo 3	9403		٠.
·			<u>. </u>			
		BRIEF FACII	LITY DESCRIPTION	N:		
	Bush - and	Treatment !	by Aerated	الحود بدر		
			· · · · · · · · · · · · · · · · · · ·			
		· .	· · · .			
•	<i>:</i>					:
•		I. PERM	IIT CHECKLIST			
YES NO N/	A 1. C	orrect name and	mailing addre	ss of permitte	e.	
YES NO N/	A 2. F	acility is as d	escribed in pe	rmit.		
YES NO W		otification has ifferent, incre			new.	
ŶE\$ 100 N/	•	umber and locat escribed in the		ge points are	as	5 · · · · · · · · · · · · · · · · · · ·
YES NO N/	A 5. N	ame and locatio	n of receiving	waters are co	rrect.	• • •
YES NO N/	A. 6. A	ll discharges a	re permitted.			
YES NO N/		ll records requ	ired by permit	are available	for a	minimum of



II. SELF-MONITORING PROGRAM

A. General

YES NO N/A 1. Samples are taken at sites specified in permit.

YES NO N/A 2. Locations are adequate for representative samples.

YES' NO N/A 3. Sampling and analysis completed on parameters specified by permit.

YES NO N/A 4. Sampling and analysis done in frequency specified by permit.

YES NO N/A 5. Permittee is using method of sample collection required by permit.

6. Sample collection procedures are adequate:

a. Samples refrigerated during compositing

b. Proper preservation techniques used

c. Containers and sample holding times before analyses conform with 40 CFR 136.3

YES NO N/A 7. Monitoring and analyses are performed more often then required by permit. If so, results reported in permittee's self-monitoring report.

Analytical results are consistent with the data reported on the DMR's.

9. Sampling and Analysis Data are adequate and include:

a. Dates, times, location of sampling

b. Name of individual performing sampling

c. Analytical methods and techniques

YES NO N/A d. Results of analysis

YEŞ NO N/A e. Dates of analysis

YES NO N/A

YES NO N/A

YES NO N/A

YES NO N/A

YES NO N/A

YES NO N/A

YES NO N/A

YES NO N/A f. Name of person performing analysis

	•
$oldsymbol{ar{ar{ar{ar{ar{ar{ar{ar{ar{ar$	
	·
	•
	·

				B. BOD ₅	Test Evalua	ation NA		
	,		1.	D.O. method used;		nkler Titra D. Probe ner	tion	
			2.	If probe list cal	ibration me	ethod;		
					a. Air	curated Wate		
					c. Wir			
YES	NO	N/A	3.	Holding time; < 4	8 hrs	•		
YES	NO	N/A	4.	Preservation; 4 d	egree C			
YES	NO	N/A	5.	Incubation; 20 de	gree C			
YES	NO	N/A	6.	Sample D.O. deple	ions; betw	een 2 mg/1.	and 6 mg/	1
YES	NO	N/A	7.	Blank D.O. variat	ion; < 0.2	mg/l		
		N/A N/A	8.	If effluent is ch a. Sample dechlor b. Sample seeded.		ow?	·	
				C. Total Suspende	l Solids Te	st Evaluati	on N/A	
YES	NO	N/A	1.	Holding time; < 7	days			
YES	·NO	N/A	2:	Oven temperature;	103 degree	- 105 degr	ee C	
YES	NO	N/A	3.	Balance Calibrated	l. Frequen	cy?	· · · · · · · · · · · · · · · · · · ·	
YES	NO	N/A	4.	Balance Serviced	it least ye	arly.		
					**			
			•	D. Ammonia Nit	ogen Test	Evaluation	MA	
			1.	Method used;			· · · · · · · · · · · · · · · · · · ·	. <u>-</u>
YES	NO	N/A	2.	Holding time; < 28	d ay s			
YES	NO	N/A	3.	Preservative; 4 de	gree C, H ₂	SO ₄ to pH <	2	•
			• .	E. Fecal Colin	orm Test E	valuation	MA	
			1.	Method used;	. MPN	· .		
				i i	. MF . Other	_ .		.:

·			
•			
			· V
	,		
		•	
. ·			
·			
		v.	

YES NO N/A	2. Holding time; < 6 hrs
YES NO N/A	3. Preservative; Sterile container, 4 degree C
YES NO N/A	4. 0.008% $Na_2S_2O_3^{5}$ added if sample chlorinated.
YES NO N/A	5. Water bath temperature; 44.5 degree C
	F. Dissolved Oxygen Test Evaluation ⊢△
	1. Method used; a. Winkler Titration b. D.O Probe c. Other
	2. Calibration (See B. BOD ₅ Test Evaluation #2)
	G. pH Test Evaluation
YES NO N/A	1. EPA approved method used. If not, method used:
YES NO N/A	2. Holding time; analyzed immediately
•	H. Aeration Tank Settleability Test Evaluation γ/Δ
YES NO N/A	1. 1000 ml graduated cylinders used
YES NO N/A	2. Time of test; 30 minutes
	I. Residual Chlorine Test Evaluation
YES NO N/A	1. EPA approved method used. If not, method used:
YES NO N/A	2. Holding time; analyzed immediately

·	
	•
andre de la companya de la companya de la companya de la companya de la companya de la companya de la companya La companya de la co	

III. LABORATORY CHECKLIST

A. General

1. Written laboratory quality assurance manual is available. YES NO N/A B. Laboratory Procedures 1. EPA approved analytical testing procedures are used. YES NO N/A Standard Methods (lastest edition) is available. YES NO N/A) 3. If alternate analytical procedures are used, proper YES NO N/A) approval has been obtained. YES NO N/A 4. Calibration and maintenance of instruments and equipment is satisfactory and records are adequate. YES NO N/A 5. Quality control procedures are used. YES NO N/A 6. Commercial laboratory is used Name Borner Anal - Fred Testing Address Rte 14 Box 583 - - Tecours Contact ____ Phone ____ 264-2354 C. Laboratory Facilities and Equipment $N^{1/2}$ 1. Proper grade distilled water is available for specific YES NO N/A analysis.

- YES NO N/A 2. Fume hood has enough ventilation capacity.
- YES NO N/A 3. The laboratory has sufficient lighting.
- YES NO N/A 4. Adequate electrical sources are available.

• .				
		•		
	•			
				•
•			·	. •
			· · ·	
				•
		•		
			·.	
				X
•				
		•		
·				
	٠.			•
·				

- YES NO N/A 5. Instruments/equipment are in good condition.
- YES NO N/A 6. Written requirements for daily operation of instruments are available.
- YES NO N/A 7. Standards are available to perform daily check procedure.
- YES NO N/A 8. Written trouble-shooting procedures for instruments are available.
- YES NO N/A 9. Schedule for required maintenance exists.
- YES NO N/A 10. Working standards are frequently checked.
- YES NO N/A 11. Standards are discarded after recommended shelf life has expired.
- YES NO N/A 12. Background reagents and solvents run with every series of samples.
- YES NO N/A 13. Written procedures exist for cleanup, hazard response methods, and applications of correction methods for reagents and solvents.

•	•	•		
•				
•				
				•
	•	•		
•	•		•	
	,			
			,	•
	•			
•				2.
		A second second second second	•	
•	1			
	•	•		
		•		
	•	•		
		•		•
			•	•
		• .		
	•	•		·
•			·	•
	·			
		•	•	
		•		•
	•			•
	•	•		• •
•			9	
			,	<i>:</i>
			•	
		· •		•
	· . ·	•		
		•	,	
	•	•		
		-	•	. •
	•		·	
				·
			·.	
	•	_		
			G	
				•
	\(\)	•		
		•		
			•	
•				
		•	•	
•			· · · · · · · · · · · · · · · · · · ·	
		•	1 m	
			· .	•
	:	•		
		•	•	•
	· ·			
	•			•
	•		,	
		•		
•	•		2	· ·
		•		
				1
			•	į.
)			•
			•	

IV. FACILITY SITE REVIEW CHECKLIST

YES NO N/A	1.	Standby power or other equivalent provision is provided.
YES NO N/A	2.	Adequate alarm system for power or equipment failures is available.
YES NO N/A	3.	All treatment units, other than back-up units, are in service.
YES NO N/A		Procedures for facility operation and maintenance \hat{j}_{j} exist.
YES NO N/A	5.	Organization plan (chart) for operation and maintenance is provided.
YES NO N/A	6.	Operating schedules are established.
YES NO N/A	7.	Emergency plan for treatment control is established.
	8.	Operating management control documents are current and include:
YES NO N/A YES NO N/A		a. Operating report b. Work schedule
YES NO N/A		c. Activity report (time cards)
YES NO N/A	9.	Adequate number of qualified operators are on-hand. \bot
YES NO N/A	10.	Established procedures are available for training new operators.
YES NO N/A	11.	Adequate spare parts and supplies inventory and major equipment specifications are maintained.
YES NO N/A	12.	Instruction files are kept for operation and maintenance of each item of major equipment.
YES NO N/A	13.	Regulatory agency was notified of by-passing. (Dates)
YES NO N/A	14.	Hydraulic and/or organic overloads are experienced. Reasons for overloads
•		

·		
,		
• .		
1		
,		
	· · · · · ·	
,		
		in the second second second second second second second second second second second second second second second
,		
•		
•		
	and the second of the second o	
	· · · · · · · · · · · · · · · · · · ·	

YES NO N/A

15. Dated tags show out of service equipment.

YES, NO N/A

16. Routine and preventive maintenance are scheduled/performed on time.

17. Plant Records are adequate and include:

YES NO N/A
YES NO N/A

a. O&M Manual /b. "As-built" engineering drawings

YES NO N/A

c. Schedules and dates of equipment maintenance and repairs including cost.

YES NO N/A YES NO N/A d. Equipment supplies manual

e. Equipment data cards

				•	
		•			
	•		•		
•					
					* .
		•	•		
	•		1		
•		•	•	•	
•		٠.		V	
				· .	
		٠.			
	•	· · · · · · · · · · · · · · · · · · ·	•		·
:		,			
,					
•	•				
<i>.</i>					•
•		•			
	•	· ·			
·				•	•
	• .			``	
			•		•
				•	•
•			•		
	•	,			
	•		•		
					·
			•	: .	
			• •		•
•					
					•
•					•
•			•		• .
	•				•
				•	
·	•				
			,		
· ·		•	* * * * * * * * * * * * * * * * * * * *		
		•			
					*2
			•		
·	. * - * - *				
•					•
•					
		· ·			
		· · · · · · · · · · · · · · · · · · ·			
	•				
					-
•			,		

V. SLUDGE DISPOSAL

1	. Amount of sludge wasted daily from clarifier: a gallons/day
	b lbs/day (dry weight)
2	. Check the method(s) utilizing for sludge handling:
	a. aerobic digestion ()
	b. anaerobid digestion ()
	c. filter press ()
	d. drying bed ()
	e. sludge lagoon ()
,	f. other ()
3.	. If sludge is hauled offsite for ultimate disposal, what
	is the quantity and freguency of hauling?
•	a. Quantity: tons
	b. Frequency: () daily () monthly
	() weekly () annually
	c. Ultimate Disposal Site:
	Name
	Location
YES NO N/A 4	. If sludge is stored in an on-site lagoon or holding pond
	has it ever been dredged or otherwise cleaned out? If
	so, when and where was the sludge disposed? When:
	Where:

			•	
			•	
		· ·		
				•
	* # 	:		•
			,	•
			•	
	· ,			
·		•	•	
	* .			
· •				
				,
		٠.		
				•
•				
	•			
	•			
·	• * * * * * * * * * * * * * * * * * * *			
	ì			
	e e			
	•			
		•		•
				,
			•	
•	•	•		
			•	
			,	
			•	

VI. FLOW MEASUREMENT CHECKLIST

A. General

YES NO N/A 1. Primary flow measuring device is properly installed and maintained.

YES) NO N/A 2. Flow records are properly kept.

YES NO(N/A) 3. Sharp drops or increases in flow values are accounted for.

YES NO N/A 4. Actual flow discharged is measured.

YES NO N/A 5. Influent flow is measured before all return lines.

YES NO N/A 6. Effluent flow is measured after all return lines.

YES NO (N/A) 7. Secondary instruments (totalizers, recorders, etc.) are properly operated and maintained.

YES NO N/A 8. Spare parts are stocked.

YES NO N/A 9. Flow monitoring records and charts are properly kept.

B. Flumes

YES NO N/A

1. Flow entering flume appears reasonable well distributed across the channel and free of turbulence, boils, or other distortions.

YES NO N/A 2. Cross-sectional velocities at entrance are relatively uniform.

YES NO N/A 3. Flume is clean and free of debris or deposits.

YES NO N/A 4. All dimensions of flume are accurate.

YES NO N/A 5. Side walls of flume are vertical and smooth.

YES NO N/A 6. Sides of flume throat are vertical and parallel.

YES NO N/A 7. Flume head is being measured at proper location.

YES NO N/A 8. Measurement of flume head is zeroed to flume crest.

YES NO N/A 9. Flume is of proper size to measure range of existing flow.

YES NO N/A 10. Flume is operating under free-flow conditions over existing range of flows.

			•	
		•		
		·.		•
	•			
				e.
			•	
				•
		•	•	
				•
	• •			
•				
			·	· .
·				
•		•		
·				
	• .	•		
		•		•
		• .		
				•
			•	
			:	
	,			
		•		÷
		•		
)	
•	:			
	·			•
				•

C. Wiers

	1	. Type of weir used:
YES NO	N/A 2	. The weir is exactly level.
YE'S NO	(N/A) 3	. The weir plate is plumb and its top edges are sharp and clean.
YES NO	N/A 4	. There is free access for air below the nappe of the weir.
YES NO	N/A 5	Upstream channel of weir is straight for at least four times the depth of water level, and free from disturbing influences.
YES NO	N/A 6	The stilling basin of the weir is of sufficient size and clear of debris.
YES NO	N/A 7	Head measurements are properly made by facility personnel.
YES NO	N/Å 8	Proper flow tables are used by facility personnel.
		D. Flowmeter H/A
	1:	Type of flowmeter used:
	2	The most common problems experienced with the flowmeter:
	3.	Measured Wastewater flow: mgd; Recorded flow: %
	4.	Design flow: mgd.
YES NO	N/A 5.	Flow totalizer is properly calibrated.
	6.	Frequency of routine inspection by proper operator:/day.
	7.	Frequency of maintenance inspections by plant personnel:/year.
	8.	Frequency of flowmeter calibration:/month.
YES NO I	N/A 9.	Flowmeter adequate to handle expected ranges of flow rates.
YES NO I	N/A 10.	Venturi meter is properly installed and calibrated.
YES NO	N/A 11.	Electromagnetic flowmeter is properly calibrated.

•			• •	•	•
					. "
	·				
			•		
•					
		•			
					,
			•		
		•			
•					
		•		•	
	×		•		
			,		
•					
,	•)	
•					
			•		
·					
			•		
		• •			
•					
		•	· · · · · · · · · · · · · · · · · · ·		
	•			:	
		·			
•			٠.		
		· ·		•	
		•			
•					
			•		
·				. (
•					•
				. 1	•
•			,		

	Former Person Contact	Tod ()
ту ₋	Person Contact	280 Chwole Handaisan Phone No: 545-46
Pum	ping Station: Yes x No 4.	. Chlorinator and Contact Chamber:Yes > No
a.	Dual Pumps Yes X No Pumps Operable: Yes X No	a. Operating: Yes No b. Baffles Adequate: Yes No
b.	Pumps Operable: Yes X No	b. Baffles Adequate: Yes No
Com	ment: 3 payring or resolve	c. Housing: Yes \overline{X} No
		d. Cylinders on Hand: Yes X No
	ation Cell: _	How Many 6
a.	Color: meen	e. Solids in Contact Chamber: Yes No
b.	Odor:	f. Air Gap in Solution Line: Yes \times No
	Floating Solids: No Few Many \(\)	g. Chlorine Residual: YesNo
đ.		Comment:
	Good Poor	
e.		Effluent:
	Condition: good ft.	a. Color: Turbid Clear
		b. Odor: Yes No
£	Grass: and	c. Sample Taken: Yes No
I.	Aerawis:	Comment:
	Number 9 6 2007 No 6.	Comount
	• <u> </u>	. General: a. Fence: Yes Yo
	Timed: Yes No V	
Com	ment: xerotoro con la avuonala	Locked Yes X No
Cata	+1: O-11	b. Upkeep: Ok × Poor Poor
seti	tling Cell:	c. Access Road Condition Good Poor
٦.	Color: green	d. Safety Hazards: Yes No_
	Odor: Yes No X	Comment:
C.	Floating Solids: No Few Many X Skimming: Yes No X	
a.	Skimming: Yes No X Effluent Structure Condition	
e.		Agration Cell 2:
f.	Good ✓ Poor Dikes:	a. Color: Erp. 11
	Condition: 9000	
		· · · · · · · · · · · · · · · · · · ·
٠. ر		= flooring solids: No
	Grass: good	a efficient em fins 1001
Call	ment:	American Control of the Control of t
Ins	pectors Recommendations to Person Contacted:	
•		
Veri	bal Commitments of Person Contacted to Correc	ct Problems:
Gene	eral Comments:	
	s this situation warrant action from the Jack	
	low-up Inspection Scheduled: YES Date	NO <u>></u>
To	responsible certified operator continuant:	MES / NO Date Departed
12	L	

.

•				•	
	• .				
		No.	•		
	•			• •	
•	•	·		•	
		•	-		
					•
				•.	
				,	
				•	
				•	
	•		• •		
		•			
		•		•	

	*	•			•
•				•	•
			·		•
		•			•
	• .			:	•
		•		*	
		•	•		,
	•				
•	•				
			•		•
			_		•
	•			·	•
		• •			
				•	
	•	•			
		•			
				·.	. 1
	•				
•	•				
		·			
• •					•
•					· .
					•
	4	•			
			•		•
				•	
•		-			
•	20 m			•	
		•			
		• •	•	•	
	•	• •	4.5		
•			**		
	•		•	2	•
	•	•			
				•	
•					
			•		
		and the second s			•
			•		
	. :				
				•	

VIII. COMPLIANCE SCHEDULE STATUS REVIEW 11/2

YES NO N/A 1. The permittee has obtained necessary approvals to begin construction.

YES NO N/A 2. Financing arrangements are complete.

YES NO N/A 3. Contracts for engineering services have been executed.

YES NO N/A 4. Design plans and specifications have been completed.

YES NO N/A 5. Construction has begun.

YES NO N/A 6. Construction is on schedule.

YES NO N/A 7. Equipment acquisition is on schedule.

YES NO N/A 8. Construction has been completed.

YES NO N/A 9. Start-up has begun.

YES NO N/A 10. The permittee has requested an extension of time.

YES NO N/A 11. The permittee has met compliance schedule.

1
· · · · · · · · · · · · · · · · · · ·
,
· · · · · · · · · · · · · · · · · · ·



STATE OF MISSISSIPPI

DEPARTMENT OF ENVIRONMENTAL QUALITY

JAMES I. PALMER, JR.

EXECUTIVE DIRECTOR

May 21, 1992

Honorable J. Ed Morgan, Mayor City of Hattiesburg 305 Sixth Street Hattiesburg, MS 39403

Dear Mayor Morgan:

Re: Hattiesburg Wastewater Treatment, Facility NPDES Permit No. MS0020826 Reconnaissance Inspection

Enclosed is a copy of the reconnaissance inspection report that was performed at the above referenced facility on April 16, 1992. The results of this inspection should be used by you as a guide for complying with requirements and limitations as stated by your NPDES permit.

If you have any questions concerning this matter, please contact us at 961-5171.

Respectfully,

J. H. Stanton, P.E. Municipal Permit Compliance Branch

JHS:dam Enclosures

cc: Mr. Pete McGarry, EPA (w/enclosures)

RO (#/ eno.

Mr. Paul Zetterholm (w/attachment)

•	;				
			•		
•		<i>2</i>			
e e e e e e e e e e e e e e e e e e e					, i
	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			•	
•		•			
:		•			
•	•			,	
•	•			•	
			•		
•				,	
			•		•
		•			
•					
•		•	•		•
				,	·
			·		
	•				
			•	•	
				• .	•
				•	•
			•		
					,
•					•
·					•
•					
			•		
•				•	
		•			
•			•		
			•		
					•
					*
		·		•	
• ,					
				•	·
		· :			

(No)

No X

General Comments: GOOD EFFLUENT QUALITY. NO DISCOLORATION OF WATER IN BOWIE RIVER.

DATE 4-16-92 TIME 11:00 A.M.

Does this situation warrant action from the Jackson Office (Yes)

Is responsible certified operator continuant: Yes \underline{x} No Date Departed

10. Follow-up Inspection Scheduled: Yes Date

MIKE EGAN RC

INSPECTOR.

		•	• .		
				•	
				•	
·	·		•		
•				. •	•
					· ·
		•	,	· ·	
				4.	
	•				
					•
				•	•
. (•		
			1 1		,
			,		
•	•				
	•		•		•
•	\mathcal{F}_{i}				
•		•		-	•
•					
	·		•		•
		•			
			e version e e e e e e e e e e e e e e e e e e e		
•				• • •	
		• .	•	• • .	
	•				
			•		4
			•		
•					
		· :	:	•	•
	•				
		•	•		
	4				
,		: .			
,					•
	·	:			
				•	
•			•	<i>'</i>	
	•				
•		•			
•				•	
• •	·				



STATE OF MISSISSIPPI

DEPARTMENT OF ENVIRONMENTAL QUALITY

RAY MABUS

GOVERNOR

September 13, 1991

Honorable J. Ed Morgan, Mayor City of Hattiesburg P. O. Box 1898 Hattiesburg, Mississippi 39403

Dear Mayor Morgan:

Re: DMR/QA Study 011

NPDES Permit Nos. MS0020826 and
MS0020303

Early in 1991 you were sent a set of NPDES laboratory performance samples and requested to complete the analysis for the parameters requiring monitoring under the terms and conditions of your NPDES permits. The results of your analysis were sent to Bionetics Corporations, Cincinnati, Ohio, and they have informed us that your results were in the acceptable range for all permitted parameters analyzed. We congratulate you on these results and encourage you to continue your successful laboratory program.

If you have any questions, do not hesitate to call me at 961-5171.

Sincerely,

Glenn L. Odom, P.E., Chief Municipal Permit Compliance Branch

GLO:RL:els

cc: Mr. Pete McGarry, EPA THIS COPY FOR

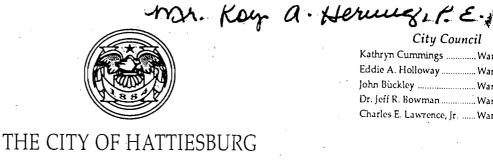
·							
						,	
					.*		•
	·						
			•				
				. •			
		<i>:</i>					·
				·			
							F.
		•					
					·	,	
						•	
							·
	•						
	•	•					
			•				. 1
		·					

Administration

George Herrington Fire Chief V. Wayne Landers Police Chief

J. Ed. MorganMayor Bennie Sellers, P.E. Director Public Services Director Planning / George Stepko Community Development Clarice Wansley Director Administration / City Clerk Iola Williams Director Recreation / Community Relations

Joseph C. Townsend Chief Financial Officer Kenneth Smith Assistant to the Mayor



City Council Kathryn CummingsWard One Eddie A. Holloway Ward Two John BückleyWard Thr Dr. Jeff R. Bowman Ward Fou Charles E. Lawrence, Jr. Ward Five

November 30, 1995

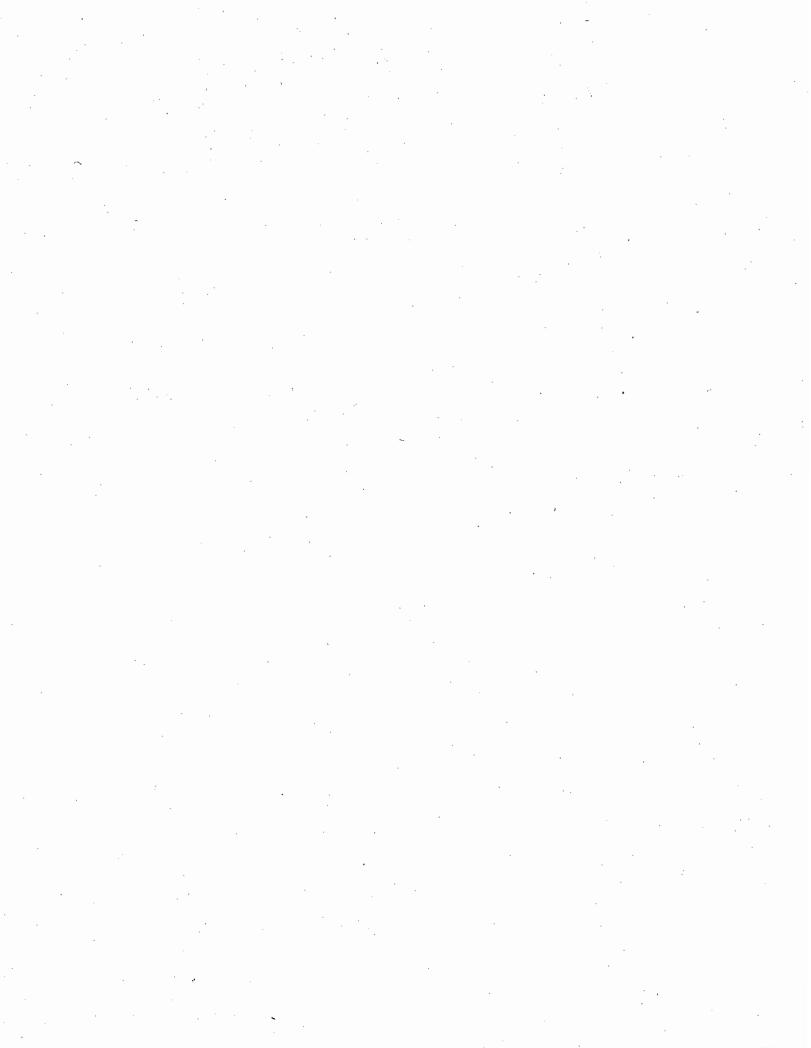
United States Environmental Protection Agency Region 4 Attention: Mr. Michael Hom, Chief FL/NC/MS Unit **Enforcement Station** Water Permits and Enforcement Branch Water Management Division 345 Courtland Street, N.E. Atlanta, Georgia 30365

RE: Compliance Inspection - NPDES Permit No. MS0020303 and No. MS0020826

Dear Mr. Hom:

With reference to your letters dated November 13, 1995 regarding the Compliance Inspection -NPDES Permit No. MS0020303 and No. MS0020826, I am attaching a copy of a memorandum from Chuck Henderson, Division Manager, Sewer Lagoon as to the actions that have been taken to correct the deficiencies stated in your letters.

I can assure you the City of Hattiesburg is committed to properly maintaining their facilities and to stay in compliance with all conditions of the NPDES Permits.



Mr. Michael Hom, Chief Water Management Division November 30, 1995

If you should have any questions or comments pertaining to this matter, please do not hesitate to contact me (601) 545-4640.

Sincerely,

Bennie J. Sellers, P.E., P.L.S.

Director of Public Services

BJS/kac

xc: Mayor J. Ed Morgan

Clarice Wansley, Director of Administration/City Clerk Joseph C. Townsend, Chief Financial Officer/Comptroller

Bobby West, General Manager, W&S O&M

Chuck Henderson, Division Manager, Sewer Lagoon

Roy A. Herwig, P.E., Water Permits and Enforcement Branch, USEPA

attachments

	en t		
	1		
		•	
	$\mathcal{L}_{\mathcal{A}}$		ė
		•	
		. •	•
			.'
			,
			**
	:	•	
		v v	
		•	
•			
		<u>.</u> .	•
			•
1			
		•	•
			٠
		· .	
	•		
			1
	`	•	
		•	
	•		
		•	
	•		
		·	
		•	

TO: Bennie Sellers, Director, Public Services

FROM: Chuck Henderson, Division Manager

DATE: November 28, 1995

. RE: E.P.A. Compliance Evaluation Inspection

In response to the letter from E.P.A. dated 11-13-95, the suggestions and deficiencies have been addressed as follows:

The contract lab has been contacted, and chain of custody forms along with sampling logs will be kept on file in my office. A city employee will accompany lab personnel when samples are collected.

The excessive vegetation and small trees have been removed from the lagoon dikes.

A service barge has been purchased to service aerators at the south lagoon. This barge should arrive within a few weeks and repairs will be made at that time.

		•				
)		
	•					
		•	•			
				•		
				•		
				•		
•						
			•			
	· · · · · · · · · · · · · · · · · · ·					
				•		
	•			•		
·					·	
•						
	•	•			·	
•				,		
		,	•			
·.		J .				
		·				
		•				
			• :	,		
					·	
					•	
	•					
· .						
						,
			• •			•
	•					
						,
		•				
	•		• .	,		
•			•			
e e e e e e e e e e e e e e e e e e e						
	•			•		
•						•
	•		**			
			•			
·						
·						

Administration

J. Ed. MorganMayor Bennie Sellers, P.E. Director

Public Services

George Stepko Director Planning /

Community Development

Clarice Wansley

... Director Administration / City Clerk

. Director Recreation / Iola Williams

Community Relations

George Herrington Fire Chief

V. Wayne Landers Police Chief

Joseph C. Townsend Chief Financial Officer Kenneth Smith Assistant to the Mayor



City Council

Kathryn Cummings Ward On-

Eddie A. Holloway Ward Tw.

John Buckley Ward Thr

Dr. Jeff R. Bowman Ward Fou

Charles E. Lawrence, Jr. Ward Fiv-

THE CITY OF HATTIESBURG

MEMORANDUM

TO:

Bennie Sellers, Director of Public Services

FROM:

J. Ed Morgan, Mayor,

RE:

Compliance Evaluation Inspection NPTES Permit No. MS0020303 and No.

MS0020826

DATE:

November 20, 1995

Please see attached hereto the <u>original</u> documentation on the above referenced inspections. Please note that corrected actions should be taken and the information submitted to the U.S. Environmental Protection Agency Region IV Office not later than November 30, 1995. Please handle this on behalf of the City, advising me when you report.

JEM/tbv

cc:

Clarice Wansley, Director of Administration/City Clerk Joe Townsend, Comptroller/Chief Financial Officer

•	•	
	·	
•		
•		
	*.	
•		
	· .	
·		
•		
		•
		•
•	·	···
	·	
		•
		·
	·	



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4

345 COURTLAND STREET, N.E. ATLANTA, GEORGIA 30365

NOV 1 3 1995

CERTIFIED MAIL P/24 043257 RETURN RECEIPT REQUESTED

REF: 4WM-WPEB

Honorable J. Ed Morgan Mayor of City of Hattiesburg Post Office Box 1898 Hattiesburg, MS 39403

SUBJ: Compliance Evaluation Inspection NPDES Permit Number MS0020826

Dear Mayor Morgan:

This office would like to thank your staff for their assistance during the Compliance Evaluation Inspection of the City's North Lagoon wastewater treatment facility on August 21, 1995. The inspection results have been summarized for the facility in the enclosed NPDES Compliance Inspection Report. One or more aspects of plant operations or record keeping were observed as being deficient during the inspection. These deficiencies are highlighted in the attached narrative, followed by their Regulatory Requirement. In addition, Suggestions are included to increase the integrity of the City's self-monitoring program.

Please provide us with the corrective actions the City has taken, or will take, to correct the noted deficiencies. This information must be submitted to this office by November 30, 1995. Until such time as the City achieves compliance with all conditions of its NPDES permit, the City is considered to be in violation of and subject to enforcement action pursuant to the Clean Water Act, 33 U.S.C. Section 1319.



If you have any questions as to the requirements of the permits, or the inspection results, please contact Mr. Roy A. Herwig, P.E. at (404) 347-4793, extension 4255.

Sincerely yours,

Michael Hom, Chief

FL/NC/MS Unit

Enforcement Section

Water Permits and Enforcement Branch

ninue m

Water Management Division

Enclosures

cc: Mississippi Department of Environmental Quality

					•	
					. '	
				·		
_				e.		
					`	
÷		•	•			
						•
,						
	/				·	
				•		•
			•			
			•			,
•	: :					•
				•	•	
	. '					
•			•			
,		,				•
			•			
		•			1	
			•		•	
	·					
	• •					1
	,					,
	· · · · · · · · · · · · · · · · · · ·	•	,			
					•	
	•					
		•			•	
				•		4
				•		
				• .		
					<i>2</i> ,	•
•						
	•					
		•				
	•					• .
			· · · · · · · · · · · · · · · · · · ·		·	
			•			
	•	•			·	
					·	
.*				•		
	•					



United States Environmental Protection Agency Washington, D.C., 20460

NPDES Compliance Inspection Report

Form Approved CMB No.2040-0003 Approval Expires 7-31-85

Section	on A: Na	tional Data System	Coding	
124/104/104/104/104	R/MO/DAY 5/08/21	Inspection Type	Inspector F	ac Type
· .		Remarks	· .	
Reserved Facility Evaluation Rating 8:		Res	erved	
	Section	on B: Facility Data	a .	
Name and Location of Facility Inspected			Entry Time/Cace: 11:30am 8/21/95	Permit Effective Date: 10/13/92
City of Hattiesburg North Plant, Lagoon Complex #2			Exit Time/Dace: 4:35pm 8/21/95	Permit Expiration Date: 10/12/97
Name(s) of On-Site Representative(s)		Title(s)		Phone No(s)
Charles E. "Chuck" Henderson, I	I	Water and Wastewa Division Manager	ter Treatment	(601) 545-4630
Name, Address of Responsible Official Hon. J. Ed Morgan		Title Mayor		
P.O. Box 1898 Hattiesburg, MS 39403		Phone No. (601) 545-4501		Contacted? NO
Section C: Areas Evaluated During Inspe	ection (S-	Satisfactory, M-Margina	al, U-Unsatisfactory,	N-Not Evaluated)
S Permit N Flow Measure M Records/Reports N Laboratory S Facility Site Review S Effluent/Rec		N Pretreatment N Compliance Sch ters M Self-Monitorin	edules <u>N</u> Sludge	ions & Maintenance Disposal
Sectio	n D: Su	nmary of Findings/	Comments	
Note - Public Works Departmen See Attached Narrative	nt is lo	cated at 900 James	Street.	
Name(s) and Signature(s) of Inspectors	Agency/Offic	ce/Telephone	·	Cate
Roy A. Herwig, P.E.	US-EPA	/WMD/(404)- 347-479	93 ext. 4255	Oct. 12, 1995
				Date .
Signature of Reviewer Milliand MM	Agency/Offic	ce		IVB498
	Regula	tory Office Use On	ly	
Action Taken			Date	Noncompliance Compliance

	•				,		
•			•				•
•			•	•			
·							
•	•		٠.				
·							
	•,			•		•	
•		•					
· .		•				•	
				•			
							•
							•
	•	· .					
		,					
				•			•
•							
		·					
			ı			· •	,
•			,	:		,	
		•		:			•
•			-				
			•				
							. *
	4						
	•						
				•			
	•	. '					
		•					
* * * * * * * * * * * * * * * * * * *			:				
	•		,	· !	,		
				•			
	•						
•						•	
•		,					
							•
	,						
	·.						
•							

City of Hattiesburg, Mississippi NPDES Permit Number MS0020303 Compliance Evaluation Inspection August 21, 1995

On August 21, 1995, Mr. Roy A. Herwig, P.E. of the United States Environmental Protection Agency, Region 4, conducted a compliance evaluation inspection at the City of Hattiesburg, Mississippi North Lagoon (Lagoon Complex Number 2). Mr. Chuck Henderson, Division Manager was present during the inspection.

Permit

Permit was located at the Department of Public Works office as there is no control building at the facility site.

Records/Reports

Observation: The City did not maintain a sampling log because the samples are collected by the contract laboratory. City personnel do not routinely accompany contract laboratory personnel during sample collection.

Requirement: The permit requires that the exact place, date and time of sampling be recorded. Further, the name of the individual collecting the sample should be recorded.

Suggestion: A City employee should accompany the contract laboratory employee when samples are collected and should record relevant sampling information in the sampling log.

Observation: Chain-of-custody forms are not kept by the City.

Suggestion: The City should maintain chain-of-custody forms for all samples collected at the facility and analyzed by the contract laboratory.

Facility Site Review

The facility is comprised of two(2) nine acre aerated lagoons in parallel followed by a single polishing pond and disinfection.

Flow Measurement

Flow measured by rectangular weir. The weir appeared to be installed properly and to be well maintained.

Laboratory

Permittee uses a contract laboratory to collect and analyze the samples required by the permit.

• .		•		·•	
, .					•
	,				
					•
		•			•
	•				
					•
					4.
				**	
	•				
					•
				•	
;	•		•	•	
	•			~ .	
•					
		•	•	,	
				*	
		•		,	*
					•
		(
					•
	• •				
				•	
		•			
					•
	٠.				•
	•				
			•		
			•	•	
					•
		•			
•					
					•
		•			

Bonner Analytical Testing 2703 Oak Grove Road Hattiesburg, MS 39402 (601) 264-2854

The contract laboratory also prepares the Discharge Monitoring Reports (DMRs) for signature by the City. Bonner Analytical Testing was not inspected.

Effluent/Receiving Waters

Not evaluated due to inaccessibility.

Pretreatment

The pretreatment program was not evaluated - implemented by the State.

Compliance Schedules

Not applicable.

Self Monitoring Program

Based upon observations noted in the Records/Reports section, the self monitoring report was adjudged to be marginal.

Operations and Maintenance

Observation: Operation and maintenance at this facility was satisfactory.

Sludge Disposal

What sludge is generated remains in the ponds.

,		
•		
•		
•		
•		
•		
·		
•		
,		
).	
		•

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER

FOI	R #	٦,	E١	ıc.	Υ (JS	Ε
		Ţ					

STANDARD FORM A - MUNICIPAL

SECTION I. APPLICANT AND FACILITY DESCRIPTION

Unless otherwise specified on this form all items are to be completed. If an item is not applicable indicate 'NA.'

	DITIONAL INSTRUCTIONS FOR SELI OKLET BEFORE FILLING OUT THES			PARATE INSTRUCT	TION BOOKLET AS IND	ICATED. REFER TO
			Please Print	oraType / 1/.		
		1 1	P. I.	I''I' = I' = I' = I' = I' = I' = I' = I	schiza	:
. 1.	Legal Name of Applicant (see instructions)	161	City O	70 11/0	spurg	
•						
2.	Mailing Address of Applicant					
	(see instructions) Number & Street	102a	P.O. Bo	<u>x 1898</u>		
	City	1025	Hattles	1459		<u> </u>
٠.	State	102c	Miss 155	SIPPI	_	
	Zip Code	1024	39403	//		
3.	Applicant's Authorized Agent	, , , ,		1		
-	(see instructions) Name and Title	1034	Charles	Henders	09/	
	•		Division	Mariago		
			900 Ja	الذ	eet	
	Number & Street	1036	Hattes	hura		
	City	103c	Mississ	100		
	State	1034	79/12	17/~	- .	· -
	Zip Code	1030	2/40/	1/1-3-5		
	Telaphone	1031	601 343-	45_30		
4.	Previous Application	1 1	Code .			
	If a previous application for a per-	l .ì	•			
	mit under the National Pollutant Discharge Elimination System has		070-0			
	been made, give the date of application.	104	X 03 17			•
1 50		'	tained in this applicant	on and that to the he	ut of muck powledge and I	selled ruch information
	ertify that I am familiar with the informa rue, complete, and accurate.	tion con	italitée in tile applicati		st of my knowledge and i	Jener such miloniarion
_		ON	1024	1 Divisie	ON Manag	<u></u>
	Printed Name of Person Si	gning			Title	
			Į.			* * * * * * * * * * * * * * * * * * * *
	1211 / 12/				970600	
	White III				120000	
	Signature of Applicant or Autr	orked A	1021		YR MO DAY Date Application Signs	d
18	U.S.C. Section 1001 provides that:		-			÷.
	oever, in any matter within the jurisdicti	on of an	y department or agenc	y of the United State	es knowingly and wilfully	falsifies, conceals or
	ers up by any trick, scheme, or device a					
	s any false writing or document knowing 0,000 or imprisoned not more than five)			titious or fraudulent s	tatement or entry, shall b	e fined not more than
9 1(, voo or unprisoned not more than five.)	eurs, or	oom.			
·						
	¥_		FOR AGEN	CY USE	oreice.	_ EPA Region Number
_					OFFICE:	
Ke	YR MO DAY					_ State .

.

	01	R /	٩G	E	10	Ϋ́	ŲS	£
П								
		_				_		

11. Average Daily Industrial Flow
Total estimated average daily waste
flow from all industrial sources.

Note: All major industries (as defined in Section IV) discharging to the municipal system must be listed in Section IV.

12. Permits, Licenses and Applications

List all existing, pending or denied permits, licenses and applications related to discharges from this facility. (see instructions)

	Issuing Agency	For Agency Use	Type of Permit or License	ID Number	Date Filed YR/MO/DA	Date Issued YR/MO/DA	Date Denied YR/MO/DA	Expiration Date YR/MO/DA
112	(A)	(b)	(c)	(d)	(a)	(1)	(g)	. (h)
1.		1000	WPDES	MS0020826		8861/26		93/01/25
		11. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1						
2.		- 11 A						
			·					
3.								

13. Maps and Drawings
Attach all required maps and drawings to the back of this application, (see instructions)

14. Additional Information

114	item Number	Information	
			- .
	·		
	, .		`
			Ü
			,
			·
			(1
			1

	•	
·		
		•
		•
		•
	•	
		•
	, '	· . · · · · · · · · · · · · · · · · · ·
•		
		•
•		·
· ·		
•		
•	·	
	·	
	· · · · · · · · · · · · · · · · · · ·	

STANDARD FORM A-MUNICIPAL

SECTION II. BASIC DISCHARGE DESCRIPTION

FOR	AGE	NCY	US	Ε

Complete this section for each present or proposed discharge indicated in Section 1, Items 7 and 8, that is to surface waters. This includes discharges to other municipal sewerage systems in which the waste water does not go through a treatment works prior to being discharged to surface waters. Discharges to wells must be described where there are also discharges to surface waters from this facility. Separate descriptions of each discharge are required even if several discharges originate in the same facility. All values for an existing discharge should be representative of the twelve previous months of operation. If this is a proposed discharge, values should reflect best engineering estimates.

ADDITIONAL INSTRUCTIONS FOR SELECTED ITEMS APPEAR IN SEPARATE INSTRUCTION BOOKLET AS INDICATED. REFER TO BOOKLET BEFORE FILLING OUT THESE ITEMS.

1.	Discharge Serial No. and Name a. Discharge Serial No. (see instructions)	261a	001	- /	
	b. Discharge Name Give name of discharge, if any (see instructions)	201b	Boule Riv	cr Discharge	001
	c. Previous Discharge Serial No if a previous NPDES permit application was made for this dis- charge (Item 4, Section I) provide previous discharge serial number.	3016	<u>001</u>		
2.	Discharge Operating Dates a. Discharge to Begin Date If the discharge has never occurred but is planned for some future date, give the date the discharge will begin.	2021	YR MO		
	b. Discharge to End Date If the discharge is scheduled to be discontinued within the next 5 years, give the date (within best estimate) the discharge will end. Give reason for discontinuing this discharge in Item 17.	2025	YR MO		
3.	Discharge Location Name the political boundaries within which the point of discharge is located:		Mina		Agency Use
	State /	2031	Mississi	SP1	2034
	County	253b	Forest		8030
	(If applicable) City or Town	2030	Hattiesbu	19	3037
4.	Discharge Point Description (see instructions) Discharge is into (check one)				
	Stream (includes ditches, arroyos, and other watercourses)	2041	Œ STR		
	Estuary /		□EST		
	Lake		LKE		
	Ocean		OCE		
	Well (Injection)		□ WEL		- N
	Other		□отн		*
	If 'other' is checked, specify type	204b			
5.	Discharge Point — Lat/Long. State the precise location of the point of discharge to the nearest second. (see instructions)		5 , 5,	7 7	
,	Latitude	2064	31 DEG. 21		
	Longitude		89 DEG. 20	MIN. A SEC	

3
,
•
,
• • •
- · · · · · · · · · · · · · · · · · · ·
i.
•
•
•
•
•

001

F	0	R /	٩G	E۱	10	Y	υŠ	E

€.	Discharge Receiving Water Name Name the waterway at the point of	2044	Rouse River	<u>(</u>
	discharge (see instructions)			
			For Agency Use For Agency Use	_
			303e	
	ha disabasan is theorem ha out-	206b	Major Minor Sub 2046	
fall	he discharge is through an out- that extends beyond the shoreline	i julius s		
	s below the mean low water line, nplete Item 7.			
· 7.	Offshore Discharge	W.L.		
7.	a. Discharge Distance from Shore	2074		
	b. Discharge Depth Below Water Surface	207b	foet	
	lischarge is from a bypass or an overflow pplicable, and continue with item 11.	point or	is a seasonal discharge from a lagoon, holding pond, etc., complete items 8, 9 or 10,	
1.	Bypass Discharge (see instructions)			
•	a. Bypass Occurrence			
	Check when bypass occurs	1 9	in. n.	
	Wet weather	2061	Yes No	
	Dry weather	20612	□ Yes □ No	
	 Bypass Frequency: Give the actual or approximate number of bypass incidents per year. 			
	Wet Weather	204 51	times per year	
	-			
	Dry weather	202 52	times per year	
	c. Bypass Duration Give the average bypass duration in hours.			
	Wet weather	20301	hours	
	Dry weather	20842	hours	
	d. Bypass Volume Give the			
	average volume per bypass incident, in thousand gallons.			
	Wet weather	20841	thousand gallons per incident	
	Dry weather	205 02	thousand gallons per incident	
	e. Bypass Reasons Give reasons			
	why bypass occurs.	2080		
		Adamie di Oktober		
		23010. 2302.		
	Proceed to Item 11.		• .	
	Overflow Discharge (see Instructions)			
••	a. Overflow Occurrence Check			
	when overflow occurs.			
	. Wet weather	209a1	□ Yes □ No	
	Dry weather	20712	□ Yes □ No	
	 Overflow Frequency Give the actual or approximate incidents per year. 			(z 📆
. •	Wet weather	20991	times per year	
	Dry weather	209b2	times per year	الشقيف

			·.			
			•	•		
		•				
				-		
	•		,			
	•		t			
	•					
						·
					-	
				•		
	•				•	
				•	•	
	\$.					
			•	. •		
	•					
			,		•	
				•		
	•					
	•				•	
	•	•		•		
			. :			
		,				
				•		
					•	
				,	•	
	•			•,		
				•	: .	
	••		•			
					•	
					·	
		•	e e	•		
	:		•	•		
		. ,			•	• .
	. •	•			-	
•			•			
•				•	·	
	•					•
		•				
		4.				
	•					
	•					

001

FOR	AG	EN	iC.	Y (JS	E

C.	Overflow Duration Give the average overflow duration in	J.		
	hours.	l		
	Wet weather	208c1	hours	
	Dry weather	600-2	Hours	
•	L Overflow-Volume Give the			
	average volume per overflow incident in thousand gallons.			
	Wet weather	20041	thousand gallons per incident	
	Dry weather	20942	thousand gallons per incident	
F	Proceed to Item 11			
O. S	jeasonal/Periodic Discharges			
a.				•
	Frequency If discharge is inter- mittent from a holding pond,	210e	times per year	
	lagoon, etc., give the actual or			
	approximate number of times this discharge occurs per year.			
. •	. Seasonal/Periodic Discharge Volume Give the average	2100	thousand gallons per discharge occurrence	
	volume per discharge occurrence			
	in thousand gallons.			
c	Seasonal/Periodic Discharge Duration Give the average dura-	210c	days 7 ·	,
	tion of each discharge occurrence in days.			
d	. Sessonal/Periodic Discharge			
	Occurrance—Months Check the months during the year when	2100	□JAN □FEB □MAR	
	the discharge normally occurs.		DAPR DAY DUN	
			JUL AUG SEP	
			OCT NOV DEC	
1. C	Sischarge Treatment			
	Discharge Treatment Description Describe waste abatement prac-			
	tices used on this discharge with		- / / / //	1.
	a brief narrative. (See instruc- tions)	2118	I reatment, for this	s discharge
		in the second	is provided by acrato	d lagoons
				J
			· · · · · · · · · · · · · · · · · · ·	
	. ,			
				
	•			
			· · · · · · · · · · · · · · · · · · ·	
				<u> </u>
	•			•



· · ·	•			\
			V 1	
		•		
er a		•	•	
•				
	•			
			•	
		,		
				•
	•			
	• • • • • •			
		.*		
•	•			
•				
		· ·		
		•		
				. '
	•			
:			•	
	• .			
				•
			es es es es es es es es es es es es es e	•
		•		
		r • *		
•		: •		<u>~</u> .
		*,		
		•		``
·				
•				
•				
	•			
				•
		•		
		•		

001



b. Discharge Treatment Codes
Using the codes listed in Table i
of the Instruction Booklet,
describe the waste abatement
processes applied to this discharge in the order in which
they occur, if possible.
Separate all codes with commas
except where slashes are used
to designate parallel operations.

2115	L A .	
	·	
		
	<u>·</u>	
1000 Co		

if this discharge is from a municipal waste treatment plant (not an overflow or bypass), complete Items 12 and 13

- 12. Plant Design and Operation Manuals Check which of the following are currently available
 - a. Engineering Design.Report
 - b. Operation and Maintenance Manual
- 13. Plant Design Data (see instructions)
 - a Plant Design Flow (mgd)
 - b. Mant Design BOD Removal (%)
 - c. Plant Design N Removal (%)
 - d. Plant Design P Removal (%)
 - e. Plant Design SS Removal (%)
 - f. Plant Began Operation (year)
 - g. Plant Last Major Revision (year)

2132	D
2123	
213e	2.0 mgs
213 b	_85 ×
2134	×
2134	<u> </u>
2130	85 .
2131	1-87
istaala w	



				A STATE OF THE STA	
•					•
			•		·
				÷	
	. ,				
	- 1		•		
		•			
	•				
	•	•		• •	
		•.•		•	
	•				
		•			
• •					
	•		•		•
			•		•
				•	
•	•				
• .					
					•
		•		• .	
		•		•	
				: .	
			A Company of the Comp		
	.*				
					•
					•
		:			
			•	•	
	•				
		•	•		
	••				
	•			• •	
				•	
•					
		,			
				:	
				•	
•					
· ·					
		. :			
		•			

001

14. Description of influent and Effluent (see instructions)



	Influent			Effluent			
Parameter and Code £214	Annual Average U Value	Annual Average Value	Lowest Monthly Average Value	Highest Monthly Average Value	Frequency of Analysis	Number of Analyses	3 Sample Type
Flow Million gallons per day 50050		1.4	0.874	2.127	3/7	156	G
pH Units 00400	X	X	6.55	8.35	1/30	12	G
Temperature (winter) F 74028							
Temperature (summer) F 74027			_				
Fecal Streptococci Bacteria Number/100 ml 74054 (Provide if available)	X	X	X				
Fecal Coliform Bacteria Number/100 ml 74055 (Provide if available)		X	X	220	1/30	12	G
Total Coliform Bacteria Number/100 ml 74056 (Provide if available)							
BOD 5-day mg/l 00310	139.6	10-1	3.6	22	1/30	12	24/ _{1,5} Conso
Chemical Oxygen Demand (COD) mg/l 00340 (Provide if available)							
OR Total Organic Carbon (TOC) mg/1 00680 (Provide if available) (Erthe analysis is acceptable)							
Chlorine-Total Residual mg/l 50060		.52	.13	.78	3/7	156	6

•			•				
							-41
•							
		•					
		, and the second	•		•		
•	•	•	•	,			
• •					•		
				•	,		•
•					•		
						,	
	·		•		•	`	
,							
						•	
· .						•	
					•		
	· ·						
:					•	•	
•							
				×			
		1					
			•				
,		·	•		•		
	•						
•		•	•				
					,		
	•						
			•		·	٠	
	•	•					
			•			:	
·			•				
		•					
			•		•		
				•	•		
	·	•					
			•				
	•				•		
		٠.					
			•				
		•					
			•				
,			v .	•	•		
						•	
•		٠			•		

FOR	AGEN	CY U	SE
		П	
	Ш	$\perp \! \! \! \! \! \perp$	

14. Description of influent and Effluent (see instructions) (Continued)

	Influent			Effluent		• .	
Parameter and Code	Annual Average	Annual Average Value	Lowest Monthly Average Value	Highest Monthly Average Value	Frequency of Analysis	Number of Analyses	3 Sample Type
Total Solids mg/l 00500							
Total Dissolved Solids mg/l 70300			•				
Total Suspended Solids mg/l 00530	1/2.3	18.3	8.6	33	1/30	12	24hr. Camp.
Settleable Matter (Residue) ml/l 00545							
Ammonia (as N) mg/l 00610 (Provide if available)							
Kjeldahl Nitrogen mg/l 00625 (Provide if available)							
Nitrate (as N) mg/l 00620 (Provide if available)							
Nitrite (as N) mg/l 00615 (Provide if available)					,		
Phosphorus Total (as P) mg/l 00665 (Provide if available)		·	·				
Dissolved Oxygen (DO) mg/l 00300	X						





			•	\mathbf{x}^{\star}
		2		
	,			•
		4		
	· // // // // // // // // // // // // //	4		·
				· · · · · · · · · · · · · · · · · · ·
	•			
	•			
•	,		·	
		•		
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \				
			•	
•		,		
•		1.4		•
	,		,	
	•			·
				•
		·		
			•	
	•			
		;		
•	•			
•				
•				

001

FOR	AG	EN	iC.	1	JSI	E
\prod						
		Ļ	;			

15. Additional Wastewater Characteristics

Check the box next to each parameter if it is present in the effluent, (see instructions)

Parameter (215)	Present	Parameter (215)	Present	Parameter (215)	Present
Bromide 71870		Cobalt 01037		Thallium 01059	
Chloride 00940		Chromium 01034		Titanium 01152	
Cyanide 00720		Copper 01042		Tin 01102	
Fluoride 00951	·	Iron 01045		Zinc 01092	
Sulfide 00745		Lead 01051		Algicides* 74051	
Aluminum 01105		Manganese 01055		Chlorinated organic compounds 74052	
Antimony 01097	.)	Mercury 71900		Oil and grease 00550	
Arsenic 01002	. ,	Molybdenum 01062		Pesticides* 74053	
Beryllium 01012		Nickel 01067		Phenols 32730	
Barium 01007		Selenium 01147		Surfactants 38260	
Boron 01022		Silver 01077		Radioactivity* 74050	
Cadmium 01027					



^{*}Provide specific compound and/or element in Item 17, if known.

Pesticides (Insecticides, fungicides, and rodenticides) must be reported in terms of the acceptable common names specified in Acceptable Common Names and Chemical Names for the Ingredient Statement on Pesticide Labels, 2nd Edition, Environmental Protection Agency, Washington, D.C. 20250, June 1972, as required by Subsection 162.7(b) of the Regulations for the Enforcement of the Federal Insecticide, Fungicide, and Rodenticide Act.



001

16. Plant Controls Check if the following plant controls are available for this discharge

Alternate power source for major pumping facility including those for collection system lift stations

Alarm for power or equipment failure

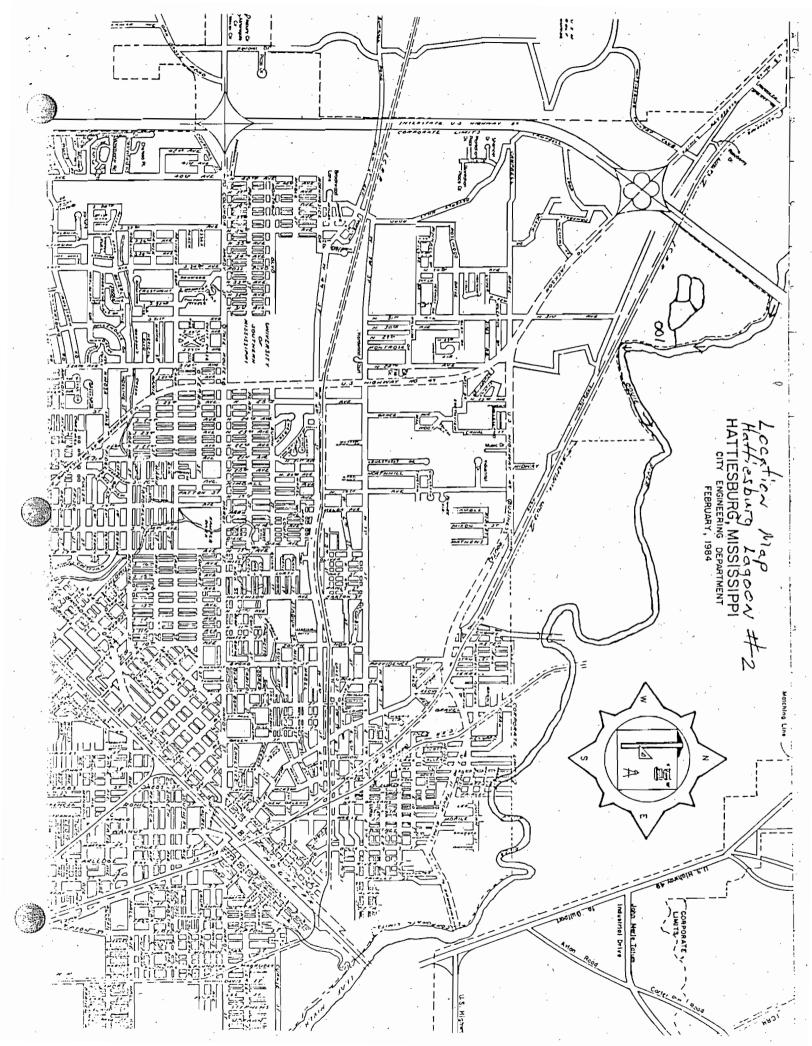


FOR	AG	ENC	Y. U.S	Ε
П				

17. Additional Information

<u></u>	ltem . Number	Information
264		
_		
	·	
_		
_		
_		
_	·	
_		
_		
_		
_		
·		
_		
_	· · · · · · · · · · · · · · · · · · ·	
_		
_		
_		
	•	
_		
_		
_		
_		
-		

	•						
						•	
		·					
			•				
	•					•	
			•	•		•	
				•	,		
	•	•					
		•	•				
,							
		. 1					
						·	•
				•	•		
		•					•
	,			•			
	•	• .		,			
		•			•	•	
		*					
						•	
				•			
				•	•		
	•	4					
					į		
		•					
					•		
		· .					
						1	
			•				
					•		
	•						
		•					
		· ·	•				
1				·		•	
			•			·	
					•		
,							
				•			
	•	•					
					•		
		•			·	•	
		•	•		•		
		•					
		•	•				
	*						
				•			
		•					
		•	. ••		r		
						•	•
-		•					
	•		•				
			•				



				•	
					•
		1.			
			:		•
			•		4 - 1,
		٠.			
			•		e.
		-			
			. *	•	
		100			
				• .	
•	· .				! ·
• •					,
			,		
•	•	1			
		•			
•	•				·
. *					•
	• •				,
			:		
· · · · · · · · · · · · · · · · · · ·		•			
·				•	• •
				· · · · · · ·	
•					
	•	•			
				•	
	•				
·					
	•	,			
•			.•	·	
	· ·				



		,		
	•			
•		•		
				~
				•
		· ·		•
	•		•	
•			•	
			•	
	•			
		•	•	
			•	
	•	•		
•			• .	
		2 .		
	•		•	
			4 · 4	
	•			
• .	•		•	
	•		•	
•				
		•	•	
				.*
	· .			
	•			
		•		
`\ .				
		•		
•				
•	•			•



Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

September 8, 2011

4SESD-ASB

MEMORANDUM

SUBJECT:

FINAL Analytical Report

Project: 11-0592, Hattiesburg North Lagoon CSI

Compliance Monitoring

FROM:

Jenny Scifres

ASB Inorganic Chemistry Section Chief

FILE COPY

THRU:

Gary Bennett, Chief

Analytical Support Branch

TO:

Richard Elliott

Attached are the final results for the analytical groups listed below. These analyses were performed in accordance with the Analytical Support Branch's (ASB) Laboratory Operations and Quality Assurance Manual (ASB LOQAM) found at www.epa.gov/region4/sesd/asbsop. Any unique project data quality objectives specified in writing by the data requestor have also been incorporated into the data unless otherwise noted in the Report Narrative. Chemistry data have been verified based on the ASB LOQAM specifications and may have been qualified if the applicable quality control criteria were not met. For a listing of specific data qualifiers and explanations, please refer to the Data Qualifier Definitions included in this report. The reported results are accurate within the limits of the method(s) and are representative only of the samples as received by the laboratory.

Analyses	Includ	led in	this	report:
----------	--------	--------	------	---------

Method Used:

	•
EPA 350.1	
EPA 351.2	
SM 5210B	
EPA 353.2	
EPA 365.1	
SM 2540D	•
	EPA 351.2 SM 5210B EPA 353.2 EPA 365.1

Page 1 of 21 E113109 CNA FINAL 9/8/11 16:31





Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0592

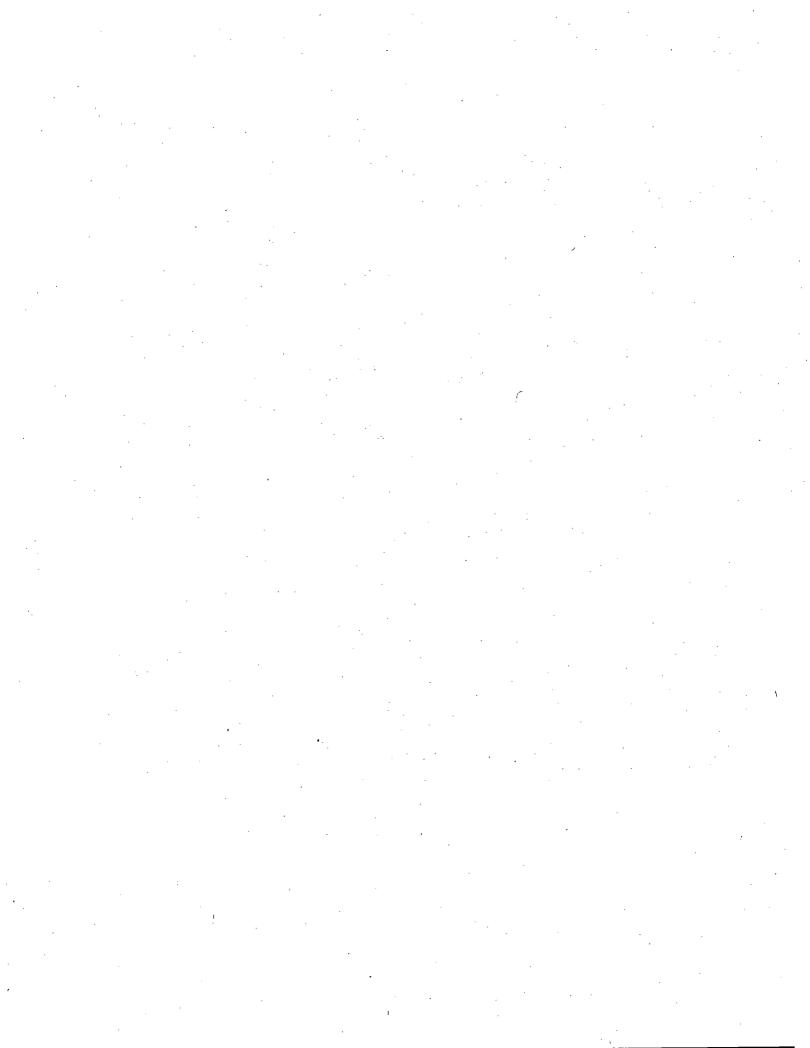
Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Sample Disposal Policy

Because of the laboratory's limited space for long term sample storage, our policy is to dispose of samples on a periodic schedule. Please note that within 60 days of this memo, the original samples and all sample extracts and/or sample digestates will be disposed of in accordance with applicable regulations. The 60-day sample disposal policy does not apply to criminal samples which are held until the laboratory is notified by the criminal investigators that case development and litigation are complete.

These samples may be held in the laboratory's custody for a longer period of time if you have a special project need. If you wish for the laboratory to hold samples beyond the 60-day period, please contact our Sample Control Coordinator, Debbie Colquitt, by e-mail at Colquitt.Debbie@epa.gov, and provide a reason for holding samples beyond 60 days

Page 2 of 21 E113109 CNA FINAL 9/8/11 16:31





Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

SAMPLES INCLUDED IN THIS REPORT

Project: 11-0592, Hattiesburg North Lagoon CSI

Sample ID	. Laboratory ID	Matrix	Date Collected	Date Received
HTNR-0001	E113109-01	Preservative Blank	7/27/11 21:19	7/29/11 9:01
HTNR-0016	E113109-04	Surface Water	7/27/11 10:45	7/29/11 9:01
HTNR-0017	E113109-05	Surface Water	7/27/11 10:45	7/29/11 9:01
HTNR-0014	E113109-07	Wastewater	7/27/11 15:16	7/29/11 9:01
HTNR-0024	E113109-08	Wastewater	7/27/11 15:16	7/29/11 9:01
HTNR-0021	E113109-09	Wastewater	7/27/11 13:55	7/29/11 9:01
HTNR-0007	E113109-10	Wastewater	7/27/11 16:08	7/29/11 9:01
HTNR-0015	E113109-11	Surface Water	7/27/11 10:30	7/29/11 9:01
HTNR-0018	E113109-12	Surface Water	7/27/11 10:30	7/29/11 9:01
HTNR-0025	E113109-13	Wastewater	7/27/11 13:50	7/29/11 9:01

9/8/11 16:31

	·
	•
	•
	•
	·
	•
·	·



Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

DATA QUALIFIER DEFINITIONS

U	The analyte was not detected at or above the reporting limit.
---	---

- A The analyte was analyzed in replicate. Reported value is an average value of the replicates.
- J The identification of the analyte is acceptable; the reported value is an estimate.
- K The identification of the analyte is acceptable; the reported value may be biased high. The actual value is expected to be less than the reported value.
- OM-2 Matrix Spike Recovery greater than method control limits
- OR-1 MRL verification recovery less than lower control limits.

ACRONYMS AND ABBREVIATIONS

CAS Chemical Abstracts Service

Note: Analytes with no known CAS identifiers have been assigned codes beginning with "E", the EPA ID as assigned by the EPA Substance Registry System (www.epa.gov/srs), or beginning with "R4-", a unique identifier assigned by the EPA Region 4 laboratory.

- MDL Method Detection Limit The minimum concentration of a substance (an analyte) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero.
- MRL Minimum Reporting Limit Analyte concentration that corresponds to the lowest demonstrated level of acceptable quantitation. The MRL is sample-specific and accounts for preparation weights and volumes, dilutions, and moisture content of soil/sediments.
- TIC Tentatively Identified Compound An analyte identified based on a match with the instrument software's mass spectral library. A calibration standard has not been analyzed to confirm the compound's identification or the estimated concentration reported.

Page 4 of 21 E113109 CNA FINAL 9/8/11 16:31

		•	;		•	
				•		
				•	•	
•		· .		<i>'</i> -		•
					•	
		•				
					•	
			•		. •	
			,	, 1		
	• •		,		•	
			•		·.	
				1	•	
	÷	••	•	S		
						• «
					•	
				,		
		·	•			•
				•		•
		,			• •	
•		•				
,			r			
	44	•	•			
•			,			•
	•	•				
• ,						·
		•	•			•
				• • •		• . •
			· · · · · · · · · · · · · · · · · · ·			
	'	• •		•		
•						
			`. ·	•		
	***					•



Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Classical/Nutrient Analyses

Project: 11-0592, Hattiesburg North Lagoon CSI

Sample ID: HTNR-0001

Lab ID: <u>E113109-01</u>

Station ID:

Matrix: Preservative Blank

Date Collected: 7/27/11 21:19

CAS. Number	Analyte	Results Qualifiers	Units	MRL Prepare	d Analyzed	Method
7664-41-7 E17148461	Ammonia as N Total Kjeldahl Nitrogen	0.050∆U 0.12 J, QR-1	mg/L mg/L	$\begin{array}{c} 0.050 = \frac{8/09/11}{9:28} \\ 0.050 = \frac{8/10/11}{12:16} \end{array}$	8/11/11 14:43 8/10/11 12:16	EPA 350.1 EPA 351.2
E701177	Nitrate/Nitrite as N	0.050 U	mg/L	0.050 8/24/11	8/24/11 20:01	EPA 353.2
7723-14-0	Total Phosphorus	0.010 U, J, QR-1	mg/L	0.010 8/12/11 8:45	8/15/11 14:14	EPA 365.1

9/8/11 16:31

	•	
e e e e e e e e e e e e e e e e e e e		
•		
•		
	: • .	
		•
•		
	*	
	$(\mathbf{r}_{i}, \mathbf{r}_{i}) = (\mathbf{r}_{i}, \mathbf{r}_{i}, $	
•	÷	
•		
· .	•	
•	•	
·		
	•	
·		
•		
	•	
	•	
	÷ .	



Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Classical/Nutrient Analyses

Project: 11-0592, Hattiesburg North Lagoon CSI

Sample ID: <u>HTNR-0016</u> Station ID: <u>DNSTRM</u> Lab ID: E113109-04

Matrix: Surface Water

Date Collected: 7/27/11 10:45

CAS Number	Analyte	Results Qualifiers	Units	MRL Prepa	red Analyzea	l Method
E1640606	BOD, 5 Day	4.0 K	mg/L	2.0 7/29/ 9.2	11 7/29/11 4 9:24	SM 5210B
E1642818	Total Suspended Solids	36	mg/L	4.0 8/03/21:1	11 8/03/11 0 21:10	SM 2540D

Page 6 of 21 E113109 CNA FINAL 9/8/11 16:31

•					•	
		·		1 .	•	
				;	•	
				,		
					5	
					•	•
•	,					•
			. 1			
			•			
			, ·			
						·
			. '			
	•		•			
					•	
					•	
		•	•	•		•
				•		
•					; ,	
		•	•			
			· ·			
		•				
			·		·	•
	•				•	
				•		
	,				•	
		•		•	,	
						•
			e .			
			•			
				* *** · · ·		
		•				
					r ·	
					· • •	
					·	
	•	·	•	•		
		•				
			•	·		
			•		•	,
		•				
					÷	
			• .		· · · · · · · · · · · · · · · · · · ·	
			:	·		



Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Classical/Nutrient Analyses

Project: 11-0592, Hattiesburg North Lagoon CSI

Sample ID: <u>HTNR-0017</u>

Lab ID: <u>E113109-05</u>

Station ID: **DNSTRM**

Matrix: Surface Water

Date Collected: 7/27/11 10:45

CAS Number	Analyte	Results Qualifiers	Units	MRL	Prepared	Analyzed	Method at	
7664-41-7 E17148461	Ammonia as N Total Kjeldahl Nitrogen	0,080 0.65	mg/L mg/L	0.050 0.050	8/09/11 9:28 8/10/11 12:16	8/11/11 14:43 8/10/11 12:16	EPA 350.1 EPA 351.2	
E701177	Nitrate/Nitrite as N	12 July 10.57	mg/L	0.050	8/24/11 20/01	8/24/11 20:01	EPA 353.2	
7723-14-0	Total Phosphorus	0.18	mg/L	0.010	8/12/11 8:45	8/15/11 14:14	EPA 365.1	. ,

Page 7 of 21 E113109 CNA FINAL 9/8/11 16:31

•	



Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Classical/Nutrient Analyses

Project: 11-0592, Hattiesburg North Lagoon CSI

Sample ID: HTNR-0014

Lab ID: <u>E113109-07</u>

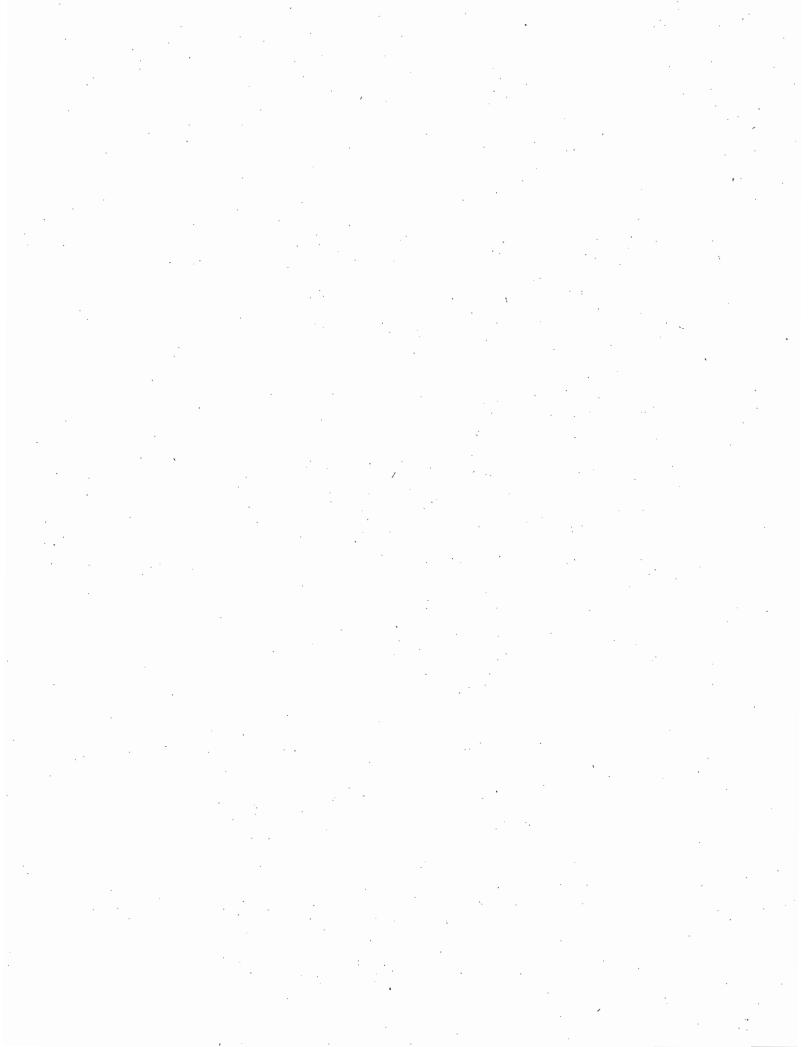
Station ID: EFF001

Matrix: Wastewater

Date Collected: 7/27/11 15:16

CAS Number	Analyte	Results Qua	listers Units	MRL	Prepared	Analyzed	Method "
7664-41-7	Ammonia as N	12	→ mg/L	0.50	8/09/11 9:28	8/11/11 14:43	EPA 350.1
E17148461	Total Kjeldahl Nitrogen	14	mg/L	1.0	8/10/11 12:16	8/10/11 12:16	EPA 351.2
E701177	Nitrate/Nitrite as N	0.81	img/L	0.050	8/24/11 20:01	8/24/11 20:01	EPA 353.2
7723-14-0	Total Phosphorus	. 11	mg/L	1.0	8/12/11 8:45	8/15/11 14:14	EPA 365.1

Page 8 of 21 E113109 CNA FINAL 9/8/11 16:31





Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg.North Lagoon CSI - Reported by Jenny Scifres

Classical/Nutrient Analyses

Project: 11-0592, Hattiesburg North Lagoon CSI

Sample ID: HTNR-0024

Lab ID: <u>E113109-08</u>

Station ID: EFF001

Matrix: Wastewater

Date Collected: 7/27/11 15:16

CAS Number	Analyte	Results Qualifiers	Units	MRL	Prepared	Analyzed	Method
E1640606	BOD, 5 Day	14	mg/L	2.0	7/29/11 12:58	7/29/11 12:58	SM 5210B
E1642818	Total Suspended Solids	24	mg/L	4.0	8/03/11 21:10	8/03/11 21:10	SM 2540D

Page 9 of 21

E113109 CNA FINAL

•	
	v = I
	•
•	



Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Classical/Nutrient Analyses

Project: 11-0592, Hattiesburg North Lagoon CSI

Sample ID: HTNR-0021

Lab ID: <u>E113109-09</u>

Station ID: INTERNAL PROCESS SAMPLE

Matrix: Wastewater

Date Collected: 7/27/11 13:55

CAS Number	Analyte	Results Qualifiers	Units	MRL	Prepared	Analyzed	Method
E1640606	BOD, 5 Day	58 A.	mg/L	2.0	7/29/11 12:24	7/29/11 12:24	SM 5210B
E1642818	Total Suspended Solids	48	mg/L	4.0	8/03/11 21:10	8/03/11 21:10	SM 2540D

Page 10 of 21 E113109 CNA FINAL 9/8/11 16:31





Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Classical/Nutrient Analyses

Project: 11-0592, Hattiesburg North Lagoon CSI

Sample ID: HTNR-0007

Lab ID: E113109-10

Station ID: PRETRT

Matrix: Wastewater

Date Collected: 7/27/11 16:08

CAS Number	Analyle	Results Qualifiers	Units	MRL	Prepared	Analyzed	Method
E1640606	BOD, 5 Day	7 140 Å	mg/L	2.0	7/29/11 13:33	7/29/11 13:33	SM-5210B
E1642818	Total Suspended Solids	470	mg/L	4.0	8/03/11 :21:10	8/03/11 21:10	SM 2540D

Page 11 of 21

E113109 CNA FINAL

		•	
•			
	•	<i>‡</i>	
	•		
			•
		40 g 1	



Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Classical/Nutrient Analyses

Project: 11-0592, Hattiesburg North Lagoon CSI

Sample ID: <u>HTNR-0015</u> Station ID: <u>UPSTRM</u> Lab ID: E113109-11

Matrix: Surface Water

Date Collected: 7/27/11 10:30

CAS Number	Analyte	Results Qualifi	iers Units	MRL	Prepared	Analyzea	Method
E1640606	BOD, 5 Day	4.0 K	mg/L	2.0	7/29/11 9:14	7/29/11 9:14	SM 5210B
E1642818	Total Suspended Solids	33	mg/L	4.0	8/03/11 21:10	8/03/11 21:10	SM 2540D

Page 12 of 21 E113109 CNA FINAL 9/8/11 16:31

•			1			. ,	
	•						
	· ·			•	•		
		•		*		· ·	
			•	·		. ,	
				•		. \	
			1		•		
					·		`,
					•		
	•		:		• •		
•	•						
				-			
•		•	•				
,							
	i		•		• .		
					•.		
					•		•
	•						
					•		
						* * * * * * * * * * * * * * * * * * *	
				÷	•		-
							•
		• •				•	
					•		•
-							
							e. E.
•				•	-	,	



Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Classical/Nutrient Analyses

Project: 11-0592, Hattiesburg North Lagoon CSI

Sample ID: <u>HTNR-0018</u> Station ID: <u>UPSTRM</u> Lab ID: E113109-12

Matrix: Surface Water

Date Collected: 7/27/11 10:30

Date Conce	.tea. //2//11 10:50						*
CAS Number	Analyte.	Results Qualifiers	Units	MRL p	repared .	tnályzed	Method
7664-41-7 E17148461	Ammonia as N Total Kjeldahl Nitrogen	0.081 0.76 J, QM-2	mg/L mg/L	0.050 0.050	8/09/11 9:28 8/10/11 12:16	8/11/11 14/43 8/10/11 12:16	EPA 350.1
E701177	Nitrate/Nitrite as N	0.60	mg/L	0.050	8/24/11 20:01	8/24/11 20:01	'EPA 353/2
7723-14-0	Total Phosphorus	0.20	mg/L	0.010	8/12/11 8:45	8/15/11 14:14	EPA 365.1

Page 13 of 21 E113109 CNA FINAL 9/8/11 16:31





Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Classical/Nutrient Analyses

Project: 11-0592, Hattiesburg North Lagoon CSI

Sample ID: HTNR-0025

Lab ID: E113109-13

Station ID: INTERNAL PROCESS SAMPLE

Matrix: Wastewater

Date Collected: 7/27/11 13:50

CAS Number	Analyte	Results Qualifiers	Units	MRL Prepared	Analyzed Method
E1640606	BOD, 5 Day	120 A	mg/L	2.0 7/29/11	7/29/11 SM 5210B
E1642818	Total Suspended Solids	61	mg/L	4.0 8/03/11 21:10	8/03/11 SM 2540D

Page 14 of 21 E113109 CNA FINAL 9/8/11 16:31





Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Classical/Nutrient Analyses (CNA) - Quality Control US-EPA, Region 4, SESD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1108014 - C 2540 Solids										
Blank (1108014-BLK1)		*		Prepared	& Analyze	ed: 08/03/	11			
SM 2540D				,						
Total Suspended Solids	U	4.0	mg/L	,			/			Ū
LCS (1108014-BS1)				Prepared	& Analyze	d: 08/03/	11			
SM 2540D						,				
Total Suspended Solids	98.800	4.0	mg/L	96.600		102	83-109			
LCS Dup (1108014-BSD1)				Prepared	& Analyze	ed: 08/03/	11.			
SM 2540D										
Total Suspended Solids	97.600	4.0	mg/L	96.600		101	83-109	1.22	10	
									•	
Dunlingto (1109014 DVD1)	So	urce: E11310	0 22	Drangrad	& Analyze	A. 09/03/	/1.1			
Duplicate (1108014-DUP1) SM 2540D		urce: E11510	8-23	Frepared	& Analyze	u. 08/03/	1,1			-
Total Suspended Solids	26.800	. 4.0	mg/L		26.100	•		2.65	10	
Total Gusperiaed Sorias	20.000				20.100			2.00		
Duplicate (1108014-DUP2)	Soi	urce: E11310	9-13	Prepared	& Analyze	ed: 08/03/	11			
SM 2540D	61 200	4.0	· · · · · · · · · · · · · · · · · · ·					0.005	. 10	
Total Suspended Solids	61.200	4.0	mg/L		60.600			0.985	. 10	
MRL Verification (1108014-PS1)		<u> </u>		Prepared	& Analyze	d: 08/03/	11			
SM 2540D										
Total Suspended Solids	3.3000	4.0	mg/L	4.8300		68.3	63-129			MRL-2,
										. U
Batch 1108028 - C SM5210 BOD										
Blank (1108028-BLK1)				Prepared	& Analyze	d: 07/29/	11			
SM 5210B							 -			
BOD, 5 Day	U-	2.0	mg/L	**				, .		U
				,						7
LCS (1108028-BS1)				Drangrad	& Analyze	A. 07/20/	11			
SM 5210B			· · ·	Ттератец	oc Allalyze	<u>. 0 11231</u>	11			
BOD, 5 Day	196.00	2.0	mg/L	195.00		. 101	79-133			
	.,,,,,,,			.,,,,,,						
LCS Dup (1108028-BSD1)				Prepared	& Analyze	ed: 07/29/	11			
SM 5210B	100.50	2.0		105.00		100	70.122	1.00	10	
BOD, 5 Day	198.50	2.0	mg/L	195.00		102	79-133	1.27	10	

Page 15 of 21 E113109 CNA FINAL

	,		•		•		
					•	•	
				• .		•	
				•,	· .		
	• •				. *	· ·	÷
-				•	,		
	,		•				
					,		
		·	•	• • • • • • • • • • • • • • • • • • • •			
		•					
			·			· ·	
•				*			
						**	
							•
		1					
						2	
	•	•		·	•		
				\$,		
							• .
• .				•	•		
		<i>(</i> .				*	
•			•				
							•
							*
				,			
•							
			· 1				
	1		·				
						•	
		•				. •	
				*** ***		•	•
		·			٠.		
			· ·		•		
•							
						÷	
			÷				
;	•	•					
				. •			
			•				
•		· .				• •	
				•			



Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Classical/Nutrient Analyses (CNA) - Quality Control US-EPA, Region 4, SESD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1108028 - C SM5210 BOD										
Duplicate (1108028-DUP1)	Sou	rce: E11310	8-12	Prepared	& Analyzo	ed: 07/29/	11			
SM 5210B BOD, 5 Day	317.00	2.0	mg/L		336.00			5.82	20	
Batch 1108043 - C 350.1 Ammonia										
Blank (1108043-BLK1)				Prepared:	08/09/11	Analyzed	l: 08/11/11			
EPA 350.1 Ammonia as N	U	0.050	mg/L			J				. U
LCS (1108043-BS1)				Prepared:	08/09/11	Analyzed	l: 08/11/11			
EPA 350.1 Ammonia as N	0.91620	0.050	mg/L	1.0000		91.6	90-110			٠.
LCS Dup (1108043-BSD1)	ζ.			Prepared:	08/09/11	Analyzed	l: 08/11/11			
EPA 350.1 Ammonia as N	0.91220	0.050	mg/L	1.0000	: .	91.2	90-110	0.438	10	
Matrix Spike (1108043-MS1)	Sou	rce: E11310	8-24	Prepared:	08/09/11	Analyzed	: l: 08/11/11			
EPA 350.1 Ammonia as N	1.0390	0.050	mg/L	1.0000	0.10960	92.9	90-110			
Matrix Spike (1108043-MS2)	Sou	ırce: E11310	9-12	Prepared:	08/09/11	Analyzed	l: 08/11/11			
EPA 350.1 Ammonia as N	1.0157	0.050	mg/L	1.0000	0.080700	93.5	90-110		<u>-</u>	
Matrix Spike Dup (1108043-MSD1)	Sou	rce: E11310	8-24	Prepared:	08/09/11	Analyzed	l: 08/11/11			
EPA 350.1 Ammonia as N	1.0431	0.050	mg/L	1.0000	0.10960	93.4	90-110	0.440	10	
Matrix Spike Dup (1108043-MSD2)	Sou	ırce: E11310	9-12	Prepared:	08/09/11	Analyzed	l: 08/11/11			
EPA 350.1 Ammonia as N	1.0393	0.050	mg/L		0.080700		90-110	2.49	10	
MRL Verification (1108043-PS1)				Prepared:	08/09/11	Analyzed	l: 08/11/11			
EPA 350.1 Ammonia as N	0.035500	0.050	mg/L	0.050000		71.0	70-130			MRL-2

·			
		+	
·			
		•	
			•
	· / /		•
		•	•
		*	•
			•
		· .	
		•	
			$\frac{1}{2} \left(\frac{1}{2} \right)^{-1} \left($
		•	. '-
		•	· · · · · · ·
			•
		•	
		•	•
		•	•
·	•		•
			•
		•	
		•	



Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Classical/Nutrient Analyses (CNA) - Quality Control US-EPA, Region 4, SESD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1108043 - C 350.1 Ammonia								-		
MRL Verification (1108043-PS1)	•			Prepared:	08/09/11	Analyzed	: 08/11/11			
									•	
Batch 1108052 - C 351.2 TKN				·						-
Blank (1108052-BLK1)				Prepared	& Analyze	d: 08/10/	11		٠.	
EPA 351.2 Total Kjeldahl Nitrogen	υ	0.050	mg/L							U
LCS (1108052-BS1)				Prepared	& Analyze	d· 08/10/	11 .			
EPA 351.2	·			Tropurou	<u>~ 1 Giai y 20</u>	<u> </u>				
Total Kjeldahl Nitrogen	2.3735	0.050	mg/L	2.3400		101	90-110			
LCS Dup (1108052-BSD1)				Prepared	& Analyze	d: 08/10/	11	٠.	٠.	
EPA 351.2 Total Kjeldahl Nitrogen	2.3686	0.050	mg/L	2.3400		101	90-110	0.207	. 15	
										•
Matrix Spike (1108052-MS1)	Sou	rce: E11310	8-24RE	1 Prepared	& Analyze	d: 08/10/	11			
EPA 351.2 Total Kjeldahl Nitrogen	1.5485	0.050	mg/L	1.0000	0.69440	85.4	90-110			QM-1
Matrix Spike (1108052-MS2)	Sou	rce: E11310	9-12RE	1 Prepared	& Analyze	d: 08/10/	 11			
EPA 351.2 Total Kjeldahl Nitrogen	1.9853	0.050	mg/L	1.0000	0.75760	123	90-110			QM-2
Matrix Spike Dup (1108052-MSD1)	Sou	rce: E11310	8-24RE	1 Prepared	& Analyze	d: 08/10/	11			·
EPA 351.2 Total Kjeldahl Nitrogen	1.6120	0.050	mg/L	1.0000	0.69440	91.8	90-110	7.17	- 20	
Matrix Spike Dup (1108052-MSD2)	Sou	rce: E11310	9-12RE	1 Prepared	& Analyze	d: 08/10/	11 .			
EPA 351.2										
Total Kjeldahl Nitrogen	1.9482	0.050	mg/L	1.0000	0.75760	119	90-110	3.07	20	QM-2
MRL Verification (1108052-PS1)				Deceased	Pr. Amaluga	d: 08/10/	1.1			·
	• •			r repareu	& Anaryze	u. 00/10/				

Page 17 of 21 E113109 CNA FINAL 9/8/11 16:31

•		•			
•					·
·			•		
				٠,	1 · · · · · · · · · · · · · · · · · · ·
				•	
			·		
		. ·			
		`			•
	•			A. Carrier	
•	·	·			
		•			•
			•		
·					
	•				
			· ·		•
4					
	•			:	
	•	•		•	
			•	· ,	•
			•		
	•				
		•	: ·		
				•	
	•				
			,		•
		•			



Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Classical/Nutrient Analyses (CNA) - Quality Control US-EPA, Region 4, SESD

Analyte		Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1108061 - C 365.1 TPh	os '			,				•			
Blank (1108061-BLK1)					Prepared:	08/12/11	Analyzed	: 08/15/11			
EPA 365.1											
Total Phosphorus		U	0.010	mg/L							U
Blank (1108061-BLK2)					Prepared:	08/12/11	Analyzed	: 08/15/11			
EPA 365.1					,	, .					
Total Phosphorus		U	0.010	mg/L							Ţ
										· .	
LCS (1108061-BS1)					Prepared:	08/12/11	Analyzed	08/15/11			
EPA 365.1			•	_							
Total Phosphorus	. :	0.41110	0.010	mg/L	0.40750		101	90-110	,		
LCS (1108061-BS2)					Prenared:	08/12/11	Analyzed	08/15/11			
EPA 365.1			,		110parea.	00,12,11	7 Lilary 200	. 00/15/11			
Total Phosphorus		0.40860	0.010	mg/L	0.40750		100	90-110			
			,								
LCS Dup (1108061-BSD1)					Prepared:	08/12/11	Analyzed	08/15/11			
EPA 365.1				<u> </u>	r repareu.	00/12/11	Allalyzed	. 06/13/11			
Total Phosphorus		0.39830	0.010	mg/L	0.40750		97.7	90-110	3.16	10	
•				Ü							,
LCS Dup (1108061-BSD2)					Prepared:	08/12/11	Analyzed	09/15/11			: :
EPA 365.1	•		· ·		r repareu.	06/12/11	Allalyzeu	. 06/13/11			
Total Phosphorus		0.40740	0.010	mg/L	0.40750		100	90-110	0.294	10	:
Madrin Spiles (11090(1 MS1)	~.	Ç.	E11210	2 20DE	l Deserved.	00/12/11	A lo d	00/15/11			
Matrix Spike (1108061-MS1) EPA 365.1		50	urce: E11310	3-38KE	Prepared:	08/12/11	Analyzed	08/13/11			
Fotal Phosphorus		0.56900	0.010	mg/L	0.50000	0.061700	101	90-110			
,		0.20,00	0.010	g.E	0.50000		101	JO-110			
			711000		ъ.	00/10/11		00/15/11			
Matrix Spike (1108061-MS2)			urce: E11320	2-07	Prepared:	08/12/11	Analyzed	08/15/11			
EPA 365.1		0 56330	0.010	ma/I	0.50000	0.055500	102	90-110			
Total Phosphorus		0.56330	0.010	mg/L	0.30000	0.055500	102	90- 110			
					,						
Matrix Spike (1108061-MS3)		So	urce: E11310	8-24	Prepared:	08/12/11	Analyzed	08/15/11			
EPA 365.1		0 (5050		_	0.4						
Total Phosphorus		0.65050	0.010	mg/L	0.50000	0.15510	99.1	90-110			,
Matrix Spike (1108061-MS4)		So	urce: E11310	9-12	Prepared:	08/12/11	Analyzed	08/15/11			

Page 18 of 21 E113109 CNA FINAL

•	
/	
•	
•	
	· · · · · · · · · · · · · · · · · · ·
•	
**	
•	
,	
•	
•	
•	



Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Classical/Nutrient Analyses (CNA) - Quality Control US-EPA, Region 4, SESD

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1108061 - C 365.1 TPhos			<u> </u>							
Matrix Spike (1108061-MS4)	Sou	rce: E11310	9-12	Prepared:	08/12/11	Analyzed	1: 08/15/11			
EPA 365.1 Total Phosphorus	0.68670	0.010	mg/L	0.50000	0.20450	96.4	90-110		-	
Matrix Spike Dup (1108061-MSD1)	Sou	rce: E11310	3-38RE1	Prepared:	08/12/11	Analyzed	l: 08/15/1		_	
EPA 365.1 Total Phosphorus	0.57590	0.010	mg/L	0.50000	0.061700	103	90-110	1.35	10	
Matrix Spike Dup (1108061-MSD2)	Sou	rce: E11320	2-07	Prepared:	08/12/11	Analyzed	l: 08/15/11			
EPA 365.1				•						
Total Phosphorus	0.56650	0.010	mg/L	0.50000	0.055500	102	90-110	0.628	10	
Matrix Spike Dup (1108061-MSD3)	Sou	rce: E11310	8-24	Prepared:	08/12/11	Analyzed	1: 08/15/11			
EPA 365.1 Total Phosphorus	0.64850	0.010	mg/L	0.50000	0.15510	98.7	90-110	0.405	10	
Matrix Spike Dup (1108061-MSD4)	Sou	rce: E11310	9-12	Prepared:	08/12/11	Analyzed	1: 08/15/11		-	-
EPA 365.1 Total Phosphorus	0.68550	0.010	mg/L	0.50000	0.20450	96.2	90-110	0.249	10	
MRL Verification (1108061-PS1)				Prepared:	08/12/11	Analyzed	l: 08/15/11			
EPA 365.1 Total Phosphorus	0.0056000	0.010	mg/L	0.010000		56.0	70-130			MRL-2, QR-1, U
Batch 1108134 - C 353.2 NO3-NO2		٠.	,							
Blank (1108134-BLK1)				Prepared	& Analyze	ed: 08/24/	11			
EPA 353.2 Nitrate/Nitrite as N	Ŭ	0.050	mg/L	٠.						U
LCS (1108134-BS1)				Prepared a	& Analyze	ed: 08/24/	11 .			٤
EPA 353.2 Nitrate/Nitrite as N	0.47860	0.050	mg/L	0.50000		95.7	90-110			٠.
LCS Dup (1108134-BSD1)				Prepared	& Analyze	ed: 08/24/	11			
EPA 353.2 Nitrate/Nitrite as N	0.48840	0.050	mg/L	0.50000		97.7	90-110	2.03	10	

•				
	·.			
			,	
	•	•	•	
	•			,
	e e e e e e e e e e e e e e e e e e e		•	
				•
	•			•
				•
	:	•	•	
	· .			
	•			
		• •		
			·	•
		• .		•
	•			
			•	
		•		•
			•	
		•		
				• .
	•			
		,		
•				
	•			
,			•	
•			•	
	•		•	•
		•	•	
		•	,	•
		•		
			•	•
	•			
		•		
•				
	,	. '		
			٠.	



Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Classical/Nutrient Analyses (CNA) - Quality Control US-EPA, Region 4, SESD

l	D14	Reporting	I I-ia-	Spike	Source	0/ DEC	%REC	nnn	RPD	21-4
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1108134 - C 353.2 NO3-NO	2									
Matrix Spike (1108134-MS1)	Soi	ırce: E11310	9-12	Prepared	& Analyze	ed: 08/24/	11_			
EPA 353.2 Nitrate/Nitrite as N	1.1073	0.050	mg/L	0.50000	0.60470	101	90-110			
Matrix Spike Dup (1108134-MSD1)	Soi	rce: E11310	9-12	Prepared	& Analyze	ed: 08/24/	11			
EPA 353.2 Nitrate/Nitrite as N	1.1196	0.050	mg/L	0.50000	0.60470	103	90-110	2.42	10	
MRL Verification (1108134-PS1)				Prepared	& Analyze	ed: 08/24/	11			
EPA 353.2 Nitrate/Nitrite as N	0.047200	0.050	mg/L	0.050000		94.4	70-130	,		MRL-2

Page 20 of 21 E113109 CNA FINAL 9/8/11 16:31

·	



Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Notes and Definitions for QC Samples

U	The analyte was not detected at or above the reporting limit
MRL-2	MRL verification for Non-Potable Water matrix
QM-1	Matrix Spike Recovery less than method control limits
QM-2	Matrix Spike Recovery greater than method control limits
QR-1	MRL verification recovery less than lower control limits.

		•			
		•			
•					
					•
. •			<i>(</i>		
<i>c</i> .		•			•
•				**	
				• ,	
:	,	• .	•	•	
				•	
			t e		
	· ·		•		•
•					
				•	
	•				
			•		
		• .			
			• •		
				•	
. ·		.*			
		•		1	•
			;		
	•				• •
					•
		·		e e e e e e e e e e e e e e e e e e e	•
		*			·
•			,		•
					•
		•			
		•		•	
					•
			•		
	•		•		

				· · · · · · · · · · · · · · · · · · ·	
			•		•
			•		
		and the second second		•	
			•		• .
				;	
•	·				
	•				
•			-	· '	
•			,		
	•				
					•
		· .	•		•
		•	•	·	
•		•			
	•				
		•			•
					•
•	•				
•				•	
	,				
•	*				
		•			
	•				
				<u> </u>	
1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -				• •	·
		•			
		•			,
		•		•	
		•			
		•			
		•		•	
·	1	•			
			•		
		•	•		
•					
					•
			•		
				· · · · · · · · · · · · · · · · · · ·	
e.					

								'
		•			,			
	•			/				
				~				
	`	. •				•		•
		,,						
		٠.		•				
					,	•		
			,		•			
					,	•		
						٠.		
					•	•		
			•					
	•					•		
			• .					
					,			
		•				•		,
		•						
							•	
	• •							
								. :
		.*						
		•						
							e e	
							e e	
							e e	
		•						
		•						
·								
·								
·								



Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

September 1, 2011

The bear

4SESD-ASB

<u>MEMORANDUM</u>

SUBJECT:

FINAL Analytical Report

Project: 11-0592, Hattiesburg North Lagoon CSI

Compliance Monitoring

FROM:

Jenny Scifres

ASB Inorganic Chemistry Section Chief

THRU:

Gary Bennett, Chief

Analytical Support Branch

TO:

Richard Elliott

Attached are the final results for the analytical groups listed below. These analyses were performed in accordance with the Analytical Support Branch's (ASB) Laboratory Operations and Quality Assurance Manual (ASB LOQAM) found at www.epa.gov/region4/sesd/asbsop. Any unique project data quality objectives specified in writing by the data requestor have also been incorporated into the data unless otherwise noted in the Report Narrative. Chemistry data have been verified based on the ASB LOQAM specifications and may have been qualified if the applicable quality control criteria were not met. For a listing of specific data qualifiers and explanations, please refer to the Data Qualifier Definitions included in this report. The reported results are accurate within the limits of the method(s) and are representative only of the samples as received by the laboratory.

Analyses included in this repo	ort: 		Method Used:	
Total Metals (TMTL)	:			

Total Mercury EPA 245.1
Total Metals EPA 200.7
Total Metals EPA 200.8

Page 1 of 18 E113109 TMTL FINAL 9/1/11 17:55

	· .
• · · · · · · · · · · · · · · · · · · ·	



Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0592

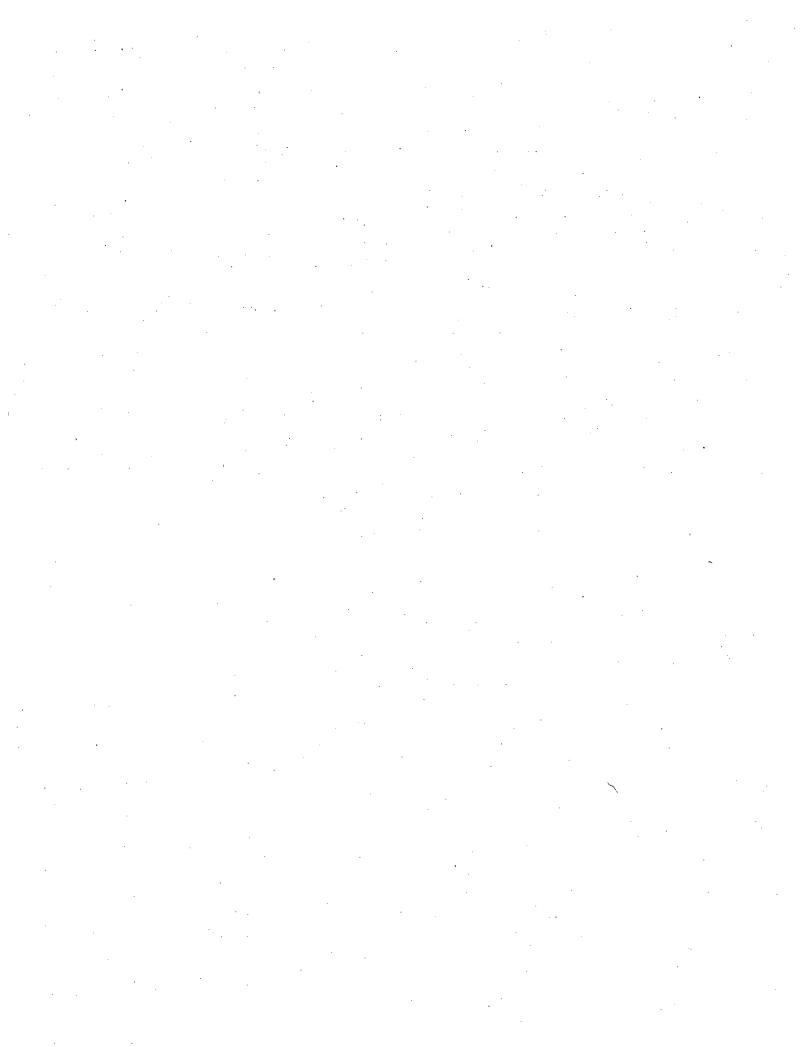
Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Sample Disposal Policy

Because of the laboratory's limited space for long term sample storage, our policy is to dispose of samples on a periodic schedule. Please note that within 60 days of this memo, the original samples and all sample extracts and/or sample digestates will be disposed of in accordance with applicable regulations. The 60-day sample disposal policy does not apply to criminal samples which are held until the laboratory is notified by the criminal investigators that case development and litigation are complete.

These samples may be held in the laboratory's custody for a longer period of time if you have a special project need. If you wish for the laboratory to hold samples beyond the 60-day period, please contact our Sample Control Coordinator, Debbie Colquitt, by e-mail at Colquitt.Debbie@epa.gov, and provide a reason for holding samples beyond 60 days

Page 2 of 18 E113109 TMTL FINAL 9/1/11 17:55





Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

SAMPLES INCLUDED IN THIS REPORT

Project: 11-0592, Hattiesburg North Lagoon CSI

Sample ID	Laboratory ID Matrix Date Collecte		Date Collected Date Received
HTNR-0002	E113109-02	Preservative Blank	7/27/11 21:20 7/29/11 9:01
HTNR-0003	E113109-03	Rinse Water Blank	7/27/11 12:36 7/29/11 9:01
HTNR-0013	E113109-06	Wastewater	7/27/11 15:16 7/29/11 9:01

9/1/11 17:55





Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

DATA QUALIFIER DEFINITIONS

U The analyte was not detected at or above the reporting limit.

The identification of the analyte is acceptable; the reported value is an estimate.

OC-5 Calibration check standard less than method control limits.

ACRONYMS AND ABBREVIATIONS

CAS Chemical Abstracts Service

Note: Analytes with no known CAS identifiers have been assigned codes beginning with "E", the EPA ID as assigned by the EPA Substance Registry System (www.epa.gov/srs), or beginning with "R4-", a unique identifier assigned by the EPA Region 4 laboratory.

- MDL Method Detection Limit The minimum concentration of a substance (an analyte) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero.
- MRL Minimum Reporting Limit Analyte concentration that corresponds to the lowest demonstrated level of acceptable quantitation. The MRL is sample-specific and accounts for preparation weights and volumes, dilutions, and moisture content of soil/sediments.
- TIC Tentatively Identified Compound An analyte identified based on a match with the instrument software's mass spectral library. A calibration standard has not been analyzed to confirm the compound's identification or the estimated concentration reported.

Page 4 of 18

		A Section 1
	¥ .	
		4
	A	
		· · · · · · · · · · · · · · · · · · · ·
•		•



Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Total Metals

Project: 11-0592, Hattiesburg North Lagoon CSI

Sample ID: HTNR-0002

Lab ID: E113109-02

Station ID:

Matrix: Preservative Blank

Date Collected: 7/27/11 21:20

Number Analyte Results Qualiflers Units MRL Prepared Analyzed Method 7439-97-6 Mercury 0.10 U ug/L 0.10 0 \$23411 \ \$2441 \ \$2451 \ \$2441 \ \$2451 \ \$2441 \ \$2450 \$2471 \ \$2441 \ \$2450 \$2471 \ \$2441 \ \$2450 \$2471 \ \$2441 \ \$2450 \$2471 \ \$2441 \ \$2450 \$2471 \ \$2441 \ \$2450 \$2471 \ \$2441 \ \$2450 \$2471 \ \$2441 \ \$2450 \$2471 \ \$2441 \ \$2450 \$2471 \ \$2441 \ \$2450 \$2471 \ \$2441 \ \$2450 \$2471 \ \$2441 \ \$2450 \$2471 \ \$2441 \ \$2450 \$2471 \ \$2441 \ \$2450 \$2471 \ \$24	CAS	cted: //2//11 21:	20							
Table Tabl	*C000000000000000000000000000000000000	Analyte		Results Qualifiers	Units	MRL	Prepared	Analyzea	l Method	
1.0 U	7439-97-6	Mercury		0.10 U	ug/L	0.10	8/23/11 8:50	8/23/11 13/41	EPA 245 1	
7440-36-0. Antimony 1.0 U ug/L 1.0 \$\frac{10.031}{10.031}\$\$\frac{60.091}{10.031}\$\$60.0	7429-90-5	Aluminum		100 U	ug/L	100	8/03/11 15:17	8/10/11 18:10	EPA 200.7	
7440-38-2 Arsenic 1.0 U ug/L 1.0 Booked British 803/11 British 803/11 British 803/11 British EPA 200.8 7440-39-3 Barium 5.0 U, I, QC-5 ug/L 5.0 British 1810 British EPA 200.7 7440-41-7 Beryllium 3.0 U ug/L 3.0 British 803/11 British EPA 200.7 7440-43-9 Cadmium 0.50 U ug/L 250 British 813/11 British EPA 200.7 7440-47-3 Chromium 5.0 U ug/L 5.0 British 810/11 British EPA 200.7 7440-48-4 Cobalt 5.0 U ug/L 5.0 British 810/11 British EPA 200.7 7440-50-8 Copper 10 U ug/L 10 British 10 Briti	7440-36-0	Antimony	Maria de la secolo	1.0 U	ug/L	1.0			EPA 200.8	
Table Tabl	7440-38-2	Arsenic		1.0 U	ug/L	1.0			EPA 200.8	-
7440-43-9 Cadmium 0.50 U ug/L 0.50 (1.54) (1.54) (1.51) (1	7440-39-3	Barium		5.0 U, J, QC-5	ug/L	5.0	8/03/11 15:17	8/10/11 18:10	EPA 200.7	2 3 44
Texas	7440-41-7	Beryllium		3.0 U	ug/L	3.0		8/10/11 18:10	EPA 200.7	
7440-47-3 Chromium 5.0 U ug/L 5.0 803/11 803/1 1 18:10	7440-43-9	Cadmium		0.50 U	ug/L	0.50	8/03/11 15:47	8/11/11 19:55	EPA 200.8	
7440-48-4 Cobalt 5.0 U ug/L 5.0 Book 15:17 Sign EPA 200.7 \$15:17 Sign EPA 200.7 \$200.7	7440-70-2	Calcium		250 U	ug/L	250	8/03/11 15:17	8/10/11 18:10	EPA 200.7	
7440-50-8 Copper 10 U ug/L 10 \$0311 \\ 18:10 \\	7440-47-3	Chromium		5.0 U	ug/L	5.0			EPA 200.7	
7439-89-6 Iron 100 U ug/L 100 B _{03/11} B _{11/1} B _{11/1} EPA 200.7 7439-92-1 Lead 1.0 U ug/L 1.0 U ug/L 1.0 U 0.0 U	7440-48-4	Cobalt		5.0 U	ug/L	5.0			EPA 200.7	
7439-92-1 Lead. 1 0 Um ug/L 1 0 803/11 8/10/1 19-55 EPA 200.8 19-37 7439-95-4 Magnesium 250 U ug/L 250 8/03/11 8/10/1 18:10 EPA 200.7 7439-96-5 Manganese 5.0 U ug/L 5.0 8/03/11 18:10 EPA 200.7 7439-98-7 Molybdenum 5.0 U ug/L 5.0 8/03/11 18:10 EPA 200.7 7440-02-0 Nickel 10 U ug/L 10 8/03/11 18:10 EPA 200.7 7440-09-7 Potassium 1000 U ug/L 1000 8/03/11 18:10 EPA 200.7 7782-49-2 Selenium 2.0 U ug/L 5.0 8/03/11 18:10 EPA 200.7 7440-22-4 Silver 5.0 U ug/L 5.0 8/03/11 18:10 EPA 200.7 7440-23-5 Sodium 1000 U ug/L 5.0 8/03/11 18:10 EPA 200.7 7440-24-6 Strontium 5.0 U ug/L 5.0 8/03/11 18:10 EPA 200.7 7440-28-0 Thallium 1.0 U ug/L 5.0 8/03/11 18:10 EPA 200.7 7440-31-5	7440-50-8	Copper		10 U	ug/L	10			EPA 200.7	
7439-95-4 Magnesium 250 U ug/L 250 8/03/11 15:11 8/10/11 18:10 11:11 EPA 200.7 7439-96-5 Manganese 5.0 U ug/L 5.0 8/03/11 18:10 11:10 EPA 200.7 7439-98-7 Molybdenum 5.0 U ug/L 5.0 8/03/11 18:10 18:10 EPA 200.7 7440-02-0 Nickel 10 U ug/L 10 8/03/11 18:10 18:10 EPA 200.7 7440-09-7 Potassium 1000 U ug/L 1000 8/03/11 18:10	7439-89- <i>6</i>				ug/L	100			EPA 200.7	
7439-96-5 Manganese 5.0 U ug/L 5.0 803/11 (1810)	7439-92-1	Lead		1.0 U	ug/L	1.0			EPA 200.8	
7439-98-7 Molybdenum 5.0 U ug/L 5.0 8/03/11 15:17 8/10/11 18:10 EPA 200.7 7440-02-0 Nickel 10 U ug/L 10 8/03/11 15:17 8/10/11 18:10 EPA 200.7 7440-09-7 Potassium 1000 U ug/L 1000 8/03/11 15:17 8/10/11 18:10 EPA 200.7 7782-49-2 Selenium 2.0 U ug/L 2.0 8/03/11 15:17 8/10/11 18:10 EPA 200.8 7440-22-4 Silver 5.0 U ug/L 5.0 8/03/11 8/10/11 EPA 200.7 7440-23-5 Sodium 1000 U ug/L 1000 8/03/11 8/10/11 EPA 200.7 7440-24-6 Strontium 5.0 U ug/L 5.0 8/03/11 8/10/11 EPA 200.7 7440-28-0 Thallium 1.0 U ug/L 15 8/03/11 8/10/11 EPA 200.7 7440-31-5 Tin 15 U ug/L 15 8/03/11 8/10/11 EPA 200.7 7440-32-6 Titanium 5/0 U ug/L 5.0 8/03/11 8/10/11 EPA 200.7 7440-32-6 Titanium 5/0 U ug/L 5/0 8/03/11 8/10/11 EPA 200.7	7439-95-4	Magnesium		250 U	ug/L	250			EPA 200.7	
7440-02-0 Nickel 10 U ug/L 10 U ug/L 10 U 203/11 USID EPA/200.7 7440-09-7 Potassium 1000 U ug/L 1000 U 15:17 USID 18:10 USID EPA/200.7 7782-49-2 Selenium 2.0 U ug/L 2.0 USID 803/11 USID 871/11 USID EPA/200.8 7440-22-4 Silver 5.0 U ug/L 5.0 USID 8/03/11 USID 18:10 USID EPA/200.7 7440-23-5 Sodium 1000 U ug/L 1000 USID 15:17 USID 18:10 USID EPA/200.7 7440-24-6 Strontium 5.0 U ug/L 5.0 USID 8/03/11 USID 15:17 USID EPA/200.8 7440-31-5 Tin 15 U ug/L 15 USID 8/10/11 USID EPA/200.7 7440-32-6 Titanium 5:0 U ug/L 5:0 USID 15:17 USID EPA/200.7	7439-96-5	Manganese		5.0 U	ug/L	5.0			EPA 200.7	
7440-09-7 Potassium 1000 U ug/L 1000 \$\begin{align*}{0.0011} & \begin{align*}{0.0011} &	7439-98-7	Molybdenum		5.0 U	ug/L	5.0			EPA 200.7	
7782-49-2 Selenium 2.0 U	7440-02-0	Nickel		10 U	υg/L	10	8/03/11 15:17	8/10/11 18:10	EPA-200.7	
7440-22-4 Silver 5.0 U ug/L 5.0 R/03/11 R/0	7440-09-7	Potassium		1000 U	ug/L	1000	8/03/11 15:17	8/10/11 18:10	EPA 200.7	
7440-23-5 Sodium 1000 Us ug/L 1000 \$\frac{803/11}{15:17}\$\$\$\frac{8710/11}{18:10}\$\$\$\text{ EPA 200.7}\$\$ 7440-24-6 Strontium 5.0 U ug/L 5.0 \$\frac{8703/11}{15:17}\$\$\$\frac{8710/11}{18:10}\$\$\$\text{ EPA 200.7}\$\$ 7440-28-0 Thallium 1.0 U ug/L 11.0 \$\frac{8703/11}{15:47}\$\$\$\frac{8710/11}{15:17}\$\$\$\text{ EPA 200.7}\$\$ 7440-31-5 Tin 15 U ug/L 15 \$\frac{8703/11}{15:17}\$\$\$\frac{8710/11}{18:10}\$\$\$\$\text{ EPA 200.7}\$\$ 7440-32-6 Titanium 5:0 U ug/L 5:0 \$\frac{8703/11}{15:17}\$\$\$\frac{8710/11}{18:10}\$\$\$\$\text{ EPA 200.7}\$\$	7782-49-2	Selenium		2.0 U	ug/L	2.0	8/03/11 15:47	8/11/11 19:55	EPA 200.8	
7440-24-6 Strontium 5.0 U ug/L 5.0 8/03/11 18:10 EPA 200.7 7440-28-0 Thallium 1.0 U ug/L 11.0 18/03/11 19:55 EPA 200.8 7440-31-5 Tin 15 U ug/L 15 8/03/11 18:10 8/10/11 18:10 EPA 200.7 7440-32-6 Titanium 5/0 U ug/L 5.0 8/03/11 18:10 EPA 200.7	7440-22-4	Silver		5.0 U	ug/L	5.0	8/03/11 15:17		EPA 200.7	
7440-28-0 Thallium 1.0 U ug/L 1.0 \$\frac{803/11}{15:47} \frac{871/11}{19:55} \text{ EPA 200 8} 7440-31-5 Tin 15 U ug/L 15 \$\frac{803/11}{15:17} \frac{8710/11}{18:10} \text{ EPA 200.7} 7440-32-6 Titanium 5:0 U ug/L 5:0 \$\frac{803/11}{15:17} \frac{8710/11}{18:10} \text{ EPA 200.7}	7440-23-5	Sodium		1000 U	ug/L	1000		8/10/11 18:10	EPA 200.7	
7440-31-5 Tin 15 U ug/L 15 8/03/11 8/10/11 EPA 200.7 7440-32-6 Fitanium 5:0 U ug/L 5.0 8/03/11 8/10/11 EPA 200.7	7440-24-6	Strontium		5.0 U	ug/L	5.0			EPA 200.7	
7440-32-6 Titanium 5.0 U ug/L 5.0 8/03/11 8/10/11 EPA 200.7	7440-28-0	Thallium		1.0 U	ug/L	1.0			EPA 200 8	7
	7440-31-5	Tin		15 U .	ug/L	15			EPA 200.7	
	7440-32-6	Titanium	2.1	5.0 U	ug/L	5.0	8/03/11 15:17	8/10/11 18:10	EPA 200.7	1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1
7440-62-2 Vanadium 5.0 U ug/L 5.0 $\frac{810311}{15:11}$ $\frac{81011}{15:11}$ EPA 200.7	7440-62-2	Vanadium		5.0 U	ug/L	5.0	8/03/11 15:17	8/10/11 18:10	EPA 200.7	
7440-65-5 Yttrium 3.0 U ug/L 3.0 8/3/11 8/10/11 EPA 200.7	7440-65-5	Yttrium		3.0 U	ug/L	3.0	8/03/11	8/10/11	EPA 200.7	
7440-66-6 Zinc 10 U ug/L 10 8/03/1 8/10/11 EPA 200.7	7440-66-6	Zinc		10 U	ug/L	; 10	8/03/11 15:17	8/10/11 18:10	EPA 200.7	

Page 5 of 18 E113109 TMTL FINAL 9/1/11 17:55

~	
	•
	,
	•



Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Total Metals

Project: 11-0592, Hattiesburg North Lagoon CSI

Sample ID: HTNR-0003

Station ID:

Lab ID: <u>E113109-03</u>

Matrix: Rinse Water Blank

Date Collected: 7/27/11 12:36

CAS Number	Analyte	Results Qualifiers	Units	MRL Prepa	red Analyzed Method
7439-97-6	Mercury	0,10 U	ug/L	0,10 8/23	/11 8/23/11 EPA 245 1
7429-90-5	Aluminum	100 U	ug/L	100 8/03	/11 8/10/11 EPA 200.7
7440-36-0	Antimony	1.0 U - +	ug/L	1.0 8/03	711 8/11/11 EPA:200.8
7440-38-2	Arsenic	1.0 U	ug/L	1.0 8/03	
7440-39-3	Barium	5.0 U, J, QC-5	ug/L	5.0 8/03	17 18:15 1 2 2 2 2
7440-41-7	Beryllium	3.0 U	ug/L	. 3.0 ^{8/03} .	
7440-43-9	Cadmium	0.50 U	ug/L	0.50 8/03	
7440-70-2	Calcium	250 U	ug/L	250 ^{8/03}	
7440-47-3	Chromium	5.0 U	ug/L	5.0 8/03	
7440-48-4	Cobalt	5.0 U	ug/L	5.0 8/03 15:	
7440-50-8	Copper	10 U	ug/L	10 8/03	
7439-89-6	Iron	100 U	ug/L	100 ^{8/03}	
7439-92-1	Lead	1.0 U	ug/L	1.0 8/03	
7439-95-4	Magnesium	250 U	ug/L	250 ^{8/03} .	/11 8/10/11 EPA 200.7
7439-96-5	Manganese	5:0 U	ug/L	5.0 8/03	
7439 - 98-7	Molybdenum	5.0 U	ug/L	5.0 8/03 15:	
7440-02-0	Nickel	10 U	ug/L	10 8/03	
7440-09-7	Potassium	1000 U	ug/L	1000 8/03	
7782-49-2	Selenium	2.0 U	ug/L	2.0 8/03	
7440-22-4	Silver	5.0 U	ug/L	5.0 8/03 15:	
7440-23-5	Sodium	1000 U	ug/L	. 1000 8/03	17 18:15 EFA 200.4
7440-24-6	Strontium	5.0 U	ug/L	5.0 8/03 15:	
7440-28-0	Thallium	1.0 U	- ⊒ug/L		(11 8/11/11 EPA 200.8
7440-31-5	Tin	15 U	ug/L	15 ^{8/03}	
7440-32-6	Titanium	5.0 U	ug/L	5.0 8/03 15	
7440-62-2	Vanadium	5.0 U	ug/L	5.0 8/03 15:	/11 8/10/11 EPA 200.7
7440-65-5	Yttrium	3.0 U	ug/L	3.0 8/03	/11 8/10/11 PDA 200/7
7440-66-6	Zinc	10 U	ug/L	10 8/03 15:	

Page 6 of 18 E113109 TMTL FINAL 9/1/11 17:55

	\cdot
•	
•	
	· .
· · · · · · · · · · · · · · · · · · ·	·
	,



Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Total Metals

Project: 11-0592, Hattiesburg North Lagoon CSI

Sample ID: <u>HTNR-0013</u>

Lab ID: <u>E113109-06</u>

Station ID: EFF001

Matrix: Wastewater

Date Collected: 7/27/11 15:16

CAS Number	Analyte	Results Qualifiers	Units	MRL Prepared	Analyzed Method
7439-97-6	Mercury	0.10 U	ug/L	+ 0.10 = \frac{8/23/11}{8:50}	8/23/11 EPA:245.1
7429-90-5	Aluminum	140	ug/L	100 8/03/11 15:17	8/10/11 18:20 EPA 200.7
7440-36-0	Antimony	1.0 U	ug/L	1.0 8/03/11	8/11/11 EPA 200.8
7440-38-2	Arsenic	1.0 U	ug/L	1.0 8/03/11	8/11/11 20:13 EPA 200.8
7440-39-3	Barium	31 J, QC-5	ug/L	5.0 8/03/11	8/10/11 EPA 200.7
7440-41-7	Beryllium	3.0 U	. ug/L	$3.0 {8/03/11 \atop 15:17}$	8/10/11 18:20 EPA 200.7
7440-43-9	Cadmium	0.50 U	ug/L	0.50 8/03/11	8/11/11 EPA 200.8
7440-70-2	Calcium	11000	ug/L	250 ^{8/03/11}	8/10/11 EPA 200:7
7440-47-3	Chromium	5.0 U 4	ug/L	5.0 8/03/11	8/10/11 EPA 200.7
7440-48-4	Cobalt	5.0 U	ug/L	5.0 ^{8/03/11} 15:17	8/10/11 18:20 EPA 200.7
7440-50-8	Copper	10 U . *	ug/L	10 8/03/11 15:17	8/10/11 EPA 200:7
7439-89-6	Iron	510	ug/L	100 ^{8/03/11}	8/10/11 EPA 200.7
7439-92-1	Lead	1.8	ug/L	1.0 8/03/11	8/11/11 EPA 200.8
7439-95-4	Magnesium	3400	ug/L	250 ^{8/03/11} 15:17	8/10/11 EPA 200.7
7439-96-5	Manganese	78	ug/L	5.0 8/03/11	18:20
7439-98-7	Molybdenum	5.0 U	ug/L	5.0 8/03/11 15:17	8/10/11 18:20 EPA 200.7
7440-02-0	Nickel	(年7年10 U 年程2月16	ug/L	10 \$\\\^{\mathbb{g}\(03/1)}_{15:17}	8/10/11 EPA 200.7
7440-09-7	Potassium	12000 U	ug/L	12000 ^{8/03/11} 15:17	^{8/10/11} EPA 200.7
7782-49-2	Selenium	2.0 U	ug/L	2.0 8/03/11	20:13 EPA 200.8-1
7440-22-4	Silver	5.0 U	ug/L	5.0 8/03/11 15:17	8/10/11 18:20 EPA 200.7
7440-23-5	Sodium	56000	ug/L	1000 8/03/11 15:17	18,20
7440-24-6	Strontium	150	ug/L	5.0 8/03/11 15:17	8/10/11 EPA 200.7
7440-28-0	Thallium	1.0 U.	ug/L	1.0 8/03/11	8/11/11 EPA 200.8
7440-31-5	Tin	15 U	ug/L	15 8/03/11 15:17	8/10/11 18:20 EPA 200.7
7440-32-6	Titanium	5.0 U	vg/L	5.0 8/03/11	8/10/11 EPA 200.7
7440-62-2	Vanadium	5.0 U	ug/L	5.0 8/03/11 15:17	8/10/11 18:20 EPA 200.7
7440-65-5	Yitrium	3.0 U	.ug/L	3.0 8/03/11	8/10/11 EPA 200.7
7440-66-6	Zinc	21	ug/L	10 8/03/11	8/10/11 18:20 EPA 200.7

Page 7 of 18 E113109 TMTL FINAL 9/1/11 17:55

•		
		·
	•	
· .		ΔV
•		
•		
•		
·		
	·	•
		,
		·
•		



Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Total Metals (TMTL) - Quality Control US-EPA, Region 4, SESD

Reporting

Source

%REC

RPD

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1108015 - M 200.2 Metals Wate	er	·. ·								
Blank (1108015-BLK1)	,			Prepared:	08/03/11	Analyzed	: 08/10/11			
EPA 200.7										
Silver	U	5.0	ug/L							τ
Arsenic	U	50	**							τ
Barium	Ū	5.0								τ
Beryllium	U	3.0	"							τ
Boron	· U	50	**							ι
Cadmium :	U	5.0	19							τ
Cobalt	Ų	5.0	. 14							τ
Chromium	· U	5.0								. 1
Copper	, , U	10	"							1
Molybdenum	U	5.0	н							
lickel	U	10	н							. 1
ead	, · U	20	*							1
Antimony	U	40	**							1
Selenium	·U	45	"			٠				1
Γin · ·	U	15								1
Strontium	. U	5.0	**			:				1
Fitanium .	U	5.0								. 1
Гhallium	. U	30	#							1
Vanadium	U	5.0	*							1
Yttrium	υ.	3.0	**							1
Zinc	U	10	"							MRL-2
Aluminum	U	100								1
Manganese	U	5.0								1
Calcium	U	250					-			
Magnesium	U	250					,			
Iron	U	100								1

9/1/11 17:55

U

Sodium

Potassium

U

U

1000

1000

	•	
		•
:		
		4
•		
	•	· · · · · · · · · · · · · · · · · · ·
	•	•
•		•
		•
•		
		•
•		
		·
		• •
		·
·		
·		
		•
		·
		•
		· ·
	•	
	•	•
<u>.</u>		
•		
		•



Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Total Metals (TMTL) - Quality Control US-EPA, Region 4, SESD

%REC

RPD

Reporting

Analyte	Result	Limit	Units	Level	· Result	%REC	Limits	RPD	. Limit	Notes
Batch 1108015 - M 200.2 Metals V	Vater						•			
LCS (1108015-BS1)				Prepared	: 08/03/11	Analyzed	1: 08/10/11			
EPA 200.7										
Silver	100.22	5.0	ug/L	100.00		. 100	85-115			
Arsenic	195.03	50	"	200.00		97.5	85-115			
Barium	194.52	5.0	"	200.00		97.3	85-115			^
Beryllium	49.917	3.0	11	50.000		99.8	85-115			
Boron	U.	50	. "	•			85-115			U
Cadmium	47.495	5.0	"	50.000	÷	95.0	85-115			
Cobalt	93.868	5.0		100.00		93.9	85-115			
Chromium	196.87	5.0	"	200.00		98.4	85-115			
Copper	96.332	10	"	100.00		96.3	85-115			
Molybdenum	101.20	5.0		100.00		101	85-115		٠.	
Nickel	196.02	. 10		200.00		98.0	85-115			
Lead	190.02	20	"	200.00		95.0	85-115			
Antimony	199.17	. 40	"	200.00		99.6	85-115			
Selenium	202.72	45	11	200.00		101	85-115			
Tin	104.51	15	н	100.00		105	85-115			
Strontium	99.468	5.0	11	100.00		99.5	85-115			
Titanium	102.12	5.0	; 11	100.00		102	85-115			
Thallium	180.07	30	•	200.00		90.0	85-115			
Vanadium	98.627	5.0	"	100.00		98.6	85-115			
Yttrium	97.591	3.0	"	100.00		97.6	85-115			,
Zinc	196.45	10	**	200.00		98.2	85-115			
Aluminum	5182.9	100	11	5000.0		104	85-115			
Manganese	508.66	5.0	11	500.00		102	85-115			,
Calcium	5206.5	250		5000.0		104	85-115			
Magnesium	5357.9	250	*	5000.0		107	85-115			
Iron	5223.2	100		5000.0		104	85-115			
Sodium	10322	1000		10000	ν,	103	85-115		<i>j</i> .	
Potassium	9728.4	1000	11	10000		97.3	85-115			

Page 9 of 18 E113109 TMTL FINAL 9/1/11 17:55

	• *
·	
·	
	•
	,



Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Total Metals (TMTL) - Quality Control US-EPA, Region 4, SESD

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Matrix Spike (1	1108015-MS1)	Sou	urce: E1	13108	3-15	Prepared:	08/03/11	Analyze	1: 08/10/11	•	
EPA 200.7									·		
Silver		104.66		5.0	ug/L	100.00	U	105	70-130		
Arsenic		210.63		50	n	200.00	U	105	70-130		
Barium,	•	276.38		5.0	" .	200.00	73.113	102	70-130		
Beryllium		52.399		3.0	н	50.000	U	105	70-130		
Boron		134.19		50			131.14		70-130		
Cadmium		50.275		5.0	**	50.000	U	101	70-130		
Cobalt		99.390		5.0	"	100.00	1.0338	98.4	70-130		
Chromium		204.15		5.0	н	200.00	Ų	102	70-130		
Copper		144.91		10	"	100.00	38.571	106	70-130		
Molybdenum		125.00		5.0	**	100.00	18.275	107	70-130		
Nickel		206.55		10	**	200.00	3.8845	101	70-130		
Lead		200.87		20		200.00	U	100	70-130		
Antimony		210.08		40	"	200.00	U	105	70-130		
Selenium		217.96		45	"	200.00	U	. 109	70-130		
Tin .		97.092		15	**	100.00	U	97.1	70-130		
Strontium		382.63		5.0	"	100.00	266.90	116	70-130		
Titanium		108.33		5.0	. н	100.00	4.8200	104	` 70-130		
Thallium		181.84		30	п	200.00	U	90.9	70-130		
Vanadium	T.	105.73		5.0	н	100.00	· U	106	70-130		
Yttrium		104.42		3.0		100.00	1.2053	103	70-130		
Zinc		307.51		10	**	200.00	92.342	108	70-130		
Aluminum		6076.0	. 1	100	in .	5000.0	629.85	109	70-130		
Manganese		645.96		5.0	н	500.00	116.23	106	70-130		
Calcium		22657	2	250	**	5000.0	17257	108	70-130		
Magnesium		11372		250	**	5000.0	5667.7	114	70-130		
Iron		7035.9		100		5000.0	1598.6	109	70-130		
Sodium		119600		000	п.	10000	105280	143	70-130		XM-1
Potassium	·	28028		000	•	10000	18545	94.8	70-130		72.1

Page 10 of 18 E113109 TMTL FINAL 9/1/11 17:55

		•				•	
:							•
*							
						•	
				•			
						•	
		•			•		
	· .						
				•			
			•	.,			•
	•	•	•				
						· · · · · · · · · · · · · · · · · · ·	
				•			*
•	•				,	. •	
,					•		
•				-			
						\$	
				•			
•		,				•	
•							
			,				
	÷ .	•					
			ī. ·			•	
	•						•
		· :		•			
				•		. 1	
•						. '	
				•	•	•	-
	•	•					
			1				
•							
					-		
							•
	3						
;							
		• • •				•	
•			•				
	• .						
					•		
	•						
,							
		•			•		•
•							
	·			•	•		
•							
	·						•
					•		•
		•					
			•				
•						•	
		•					
,						•	
							•
• •							
			4		-		
		•		*	•		
			•				



Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0592

Project: 11-0592; Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Total Metals (TMTL) - Quality Control US-EPA, Region 4, SESD

Spike

Source

%REC

RPD

Reporting

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1108015 - M 200.2 Metals Wate	r	·								
Matrix Spike (1108015-MS2)	Sour	ce: E11310	9-06	Prepared:	08/03/11	Analyzed	: 08/10/11			
EPA 200.7										
Silver	96.888	5.0	. ug/L	100.00	U	96.9	70-130			
Arsenic	192.48	50	H	200.00	· U	96.2	70-130			
Barium	227.40	5.0	H	200.00	31.215	98.1	70-130			
Beryllium	50.009	3.0	н	50.000	U	100	70-130			
Boron	149.22	50	н		154.17		70-130			
Cadmium	44.906	5.0	H	50.000	U .	89.8	70-130			
Cobalt	92.336	5.0	n	100.00	U	92.3	70-130			
Chromium	188.90	5.0	"	200.00	U	94.5	70-130			
Copper	105.17	10	"	100.00	8.1542	97.0	70-130	•		
Molybdenum	101.86	5.0	. н	100.00	3.9059	98.0	70-130			
Nickel	189.85	10	"	200.00	2.5140	93.7	70-130			
Lead	187.37	20	,	200.00	U	93.7	70-130			
Antimony	193.25	40	n	200.00	U	96.6	70-130			
Selenium	209.29	45	H	200.00	U	105	70-130			
Tin	98.209	. 15	н .	100.00	U	98.2	70-130			
Strontium	238.41	5.0	11	100.00	147.42	91.0	70-130			
Titanium	102.01	5.0		100.00	U	102	70-130			
Thallium	174.56	30	H	200.00	U	87.3	70-130			
Vanadium	97.668	5.0		100.00	U	97.7	70-130			
Yttrium	96.604	3.0	. "	100.00	0.25508	. 96.3	70-130		•	
Zinc	221.42	10	н	200.00	20.541	100	70-130			
Aluminum	5166.1	100	н	5000.0	141.92	100	70-130			
Manganese	561.53	5.0		500.00	77.508	96.8	70-130			
Calcium	16044	250	н.	5000.0	11482	91.2	70-130			
Magnesium	8493.6	250	11	5000.0	3387.7	102	70-130			
Iron	5653.5	100	"	5000.0	513.73	103	70-130			
Sodium	64383	1000		10000	56124	82.6	70-130			
Potassium (19651	1000	,	10000	10561	90.9	70-130			·.

E113109 TMTL FINAL

•
0.00
•
•
•
•
·
•
÷
* *
•
•
•
•
-



Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Total Metals (TMTL) - Quality Control US-EPA, Region 4, SESD

Amalada	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Analyte	Result	Lunt	Ullis	Level	· Kesuit	70KEC	Linits	KPD	Linit	Notes
Batch 1108015 - M 200.2 Metals Wa	ter			_						
Matrix Spike Dup (1108015-MSD1)	Sour	ce: E11310	8-15	Prepared:	08/03/11	Analyzed	: 08/10/11			
EPA 200.7										
Silver	98.978	5.0	ug/L	100.00	U	, 99.0	70-130	5.58	20	
Arsenic	202.30	50	"	200.00	U	101	70-130	4.03	20	
Barium	265.93	5.0	".	200.00	73.113	96.4	70-130	3.86	20	
Beryllium	50.840	3.0	"	50.000	Ü	102	70-130	. 3.02	20	
Boron	127.76	. 50	"		131.14		70-130	4.91	20	
Cadmium (47.942	5.0	"	50.000	U	95.9	70-130	4.75	20	
Cobalt	94.303	5.0	. "	100.00	1.0338	93.3	70-130	5.25	20	
Chromium	193.31	5.0	n	200.00	U	96.7	70-130	5.46	20	
Copper	139.60	· 10	**	100.00	38.571	101	70-130	3.73	20	
Molybdenum	117.65	5.0	"	100.00	18.275	99.4	70-130	6.06	20	
lickel	195.43	10	"	200.00	3.8845	95.8	70-130	5.53	20	
ead	190.83	20	"	200.00	U	95.4	70-130	5.13	20	
Antimony	197.92	40	*	200.00	U	99.0	70-130	5.96	20	
elenium	213.27	45	n	200.00	U	107	70-130	2.17	20	
in .	94.633	15	"	100.00	U	94.6	70-130	2.57	20	
Strontium	355.59	5.0	Ÿ.	100.00	266.90	88.7	70-130	7.33	20	
itanium	105.68	5.0		100.00	4.8200	. 101	70-130	2.47	20	
hallium	176.60	- 30	н	200.00	U	88.3	70-130	2.92	20	
Vanadium	100.46	5.0	*	100.00	U	100	70-130	5.11	20	
Yttrium	98.686	3.0	"	100.00	1.2053	97.5	70-130	5.65	20	
Zinc	292.80	10	•	200.00	92.342	100	70-130	4.90	20	
Aluminum	5809.7	100		5000.0	629.85	104	70-130	4.48	20	
Manganese	615.33	5.0	· , n ·	500.00	116.23	99.8	70-130	4.86	20	
Calcium	21525	250		5000.0	17257	85.3	70-130	5.13	20	
Magnesium	10816	250	,	5000.0	5667.7	103	70-130	5.01	20	
ron	6824.8	100	"	5000.0	1598.6	105	70-130	3.05	20	
Sodium	112430	1000	н	10000	105280	71.4	70-130	6.18	20	XM
Potassium	27088	1000	,	10000	18545	85.4	70-130	3.41	20	

E113109 TMTL FINAL 9/1/11 17:55





Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Total Metals (TMTL) - Quality Control US-EPA, Region 4, SESD

Spike

%REC

Reporting

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
		24	·			- vicee	·	МЪ	·Limit	Ivotes
Batch 1108015 - M 200.2 Metals Wate	r									
Matrix Spike Dup (1108015-MSD2)	So	urce: E11310	9-06	Prepared:	08/03/11	Analyzed	1: 08/10/11			
EPA 200.7										
Silver	100.59	5.0	ug/L	100.00	U	101	70-130	3.75	20	
Arsenic	199.72	50		200.00	U .	99.9	70-130	3.69	20	
Barium	230.35	5.0	"	200.00	31.215	99.6	70-130	1.29	20	
Beryllium	50.552	3.0	"	50.000	U	101	70-130	1.08	20	
Boron	153.48	50	۳.		154.17		70-130	2.81	20	
Cadmium	47.531	5.0	"	50.000	U	95.1	70-130	5.68	20	
Cobalt	96.225	5.0	"	100.00	U	96.2	70-130	4.12	20	
Chromium	200.29	5.0	"	200.00	U .	100	70-130	5.85	20	
Copper	. 108.06	10		100.00	8.1542	99.9	70-130	2.71	20	
Molybdenum	106.56	5.0	"	100.00	3.9059	103	70-130	4.51	20	
lickel	198.00	10	"	200.00	2.5140	97.7	70-130	4.20	20	
ead	195.57	20	,,	200.00	3 U	97.8	70-130	4.28	. 20	
Antimony	204.88	40		200.00	· U	102	70-130	5.84	20	
Selenium	206.46	45		200.00	U	103	70-130	1.36	20	
l'in	105.79	15		100.00	U	106	70-130	7.43	20	
Strontium	242.98	5.0	"	100.00	147.42	95.6	70-130	1.90	20	
litanium	104.89	5.0	*	100.00	. U	105	70-130	2.78	20	
Thallium '	189.12	30		200.00	U	94.6	70-130	8.01	20	
Vanadium	101.85	5.0	. •	100.00	U	102	70-130	4.19	20	
/ttrium	98.093	3.0		100.00	0.25508	97.8	70-130	1.53	20	
Zinc -	229.60	10		200.00	20.541	105	70-130	3.63	20	
Aluminum	5321.9	100		5000.0	141.92	104	70-130	2.97	20	
Manganese	582.42	5.0	"	500.00	77.508	101	70-130	3.65	20	
Calcium	16493	250		5000.0	11482	100	70-130	2.76	20	
Magnesium	8738.8	250	. "	5000.0	3387.7	107	70-130	2,85	20	
ron	5801.2	100		5000.0	513.73	106	70-130	2.58	20	
odium	66169	1000		10000	56124	100	70-130	2.74	20	. ,
Potassium	20384	1000		10000	10561	98.2	70-130	3.66	20	

Page 13 of 18

•		,	•	•	
		•			
			* .		
y		- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1			
		**			•
			•		
		•			
				and the second second	
		•			•
·					•
	•		.*		•
				•	,
			`	() () () ()	,
-					
				N. C. C. C. C. C. C. C. C. C. C. C. C. C.	
	•				
	•	w	· ·		•
				•	
	•				
	•				
·		i			·,
					•
	•				
					<u>,</u>
				÷ .	
			•		
		•			
•	•				
				`	• •
	•				
·					tre e
	. •				•
-		· · · · · · · · · · · · · · · · · · ·	And the second second		
•					
•					· · · · · · · · · · · · · · · · · · ·
•					
•	•				
			•		
	·	•		* • •	
				,	
		•			
				•	
					· · · · · · · · · · · · · · · · · · ·
•		· f		•	
		4	•	i ·	•
•				Fs.	



Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Total Metals (TMTL) - Quality Control US-EPA, Region 4, SESD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1108015 - M 200.2 Metals Wat	ter									
MRL Verification (1108015-PS1)		1.		Prepared:	08/03/11	Analyze	d: 08/10/11			
EPA 200.7			٠.							
Silver	5.5080	5.0	ug/L	5.0000		110	70-130			MRL-2
Arsenic	45.791	50	"	50.000		91.6	70-130			MRL-2
Barium	6.0554	5.0	, 11	5.0000		121	70-130			MRL-2
Beryllium	3.0741	3.0		3.0000		102	70-130			MRL-2
Boron	51.086	50	i.	50.000		102	70-130			MRL-2
Cadmium	4.9672	5.0	"	5.0000		99.3	70-130			MRL-2
Cobalt	5.1286	5.0		5.0000		103	70-130			MRL-2
Chromium	5.0481	5.0	"	5.0000		101	70-130			MRL-2
Copper	10.100	10	*	10.000		101	70-130			MRL-2
Molybdenum	11.234	5.0	* .	10.000		112	70-130			MRL-2
lickel	11.578	10	11,	10.000		116	70-130	,		MRL-
ead	19.158	20	"	20.000		95.8	70-130			MRL-2
antimony	40.471	40	*	40.000		101	70-130			MRL-2
elenium	50.462	45	*	45.000		112	70-130		,	MRL-2
in :	15.374	15	*	15.000		102	70-130			MRL-
trontium	5.5439	5.0	•	5.0000		111	70-130			MRL-2
itanium	5.0386	5.0	"	5.0000		101	70-130			MRL-2
hallium	28.767	30	. "	30.000		95.9	70-130			MRL-2
/anadium	4.2505	5.0	•	5.0000		85.0	70-130			MRL-2
Ttrium Ttrium	3.1892	3.0	'n	3.0000		106	70-130			MRL-2
inc	10.510	10	•	10.000		105	70-130			MRL-2
luminum	119.29	100	"	100.00		119	70-130			MRL-2
fanganese	5.1329	5.0	"	5.0000		103	70-130			MRL-2
Calcium	329.18	250	•	250.00		132	70-130			MRL-2
agnesium (273.50	250	. "	250.00		109	70-130			QR-2 MRL-2
on	110.13	100	" .	100.00		110	70-130		. '	MRL-2
odium	1332.2	1000	"	1000.0		133	70-130			MRL-2 QR-2
otassium	1021.0	100Ó	. "	1000.0		102	70-130			MRL-2

Page 14 of 18





Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Total Metals (TMTL) - Quality Control US-EPA, Region 4, SESD

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1108016 - M 200.2 Metals Wate	r							`		
Blank (1108016-BLK1)	•			Prepared	08/03/11	Analyzed	: 08/11/11			
EPA 200.8			1							
Arsenic	$\mathbf{U}_{_{\perp}}$	1.0	ug/L							1
Selenium	. U	2.0	N							
Cadmium	U	0.50	"							
Antimony	U	1.0	*							
Thallium	U ·	1.0	"				,			
ead	. U	1.0	" .							
LCS (1108016-BS1)				Prepared:	: 08/03/11	Analyzed	: 08/11/11		٠.	
EPA 200.8	-					, ,				
Arsenic	197.32	5.0	ug/L	200.00		98.7	85-115			,
elenium	200.32	10	" ·	200.00		100	85-115			
Cadmium	48.619	2.5	*	50.000		97.2	85-115			
intimony	190.89	5.0	,,	200.00		95.4	85-115			
hallium .	212.50	5.0	•	200.00		106	85-115			
.ead /	204.36	5.0	,	200.00		102	85-115.			
					09/02/11	Analyzed	· 08/11/11			
Matrix Spike (1108016-MS1)	Sou	urce: E11310	8-15	Prepared:	00/03/11		. 00/11/11			
	Soi	urce: E11310	8-15	Prepared	06/03/11		. 00/11/11			
PA 200.8	202.74	urce: E11310 5.0	ug/L	200.00	1.0871	101	70-130			
EPA 200.8 Arsenic						-				:
EPA 200.8 Arsenic elenium	202.74	5.0	ug/L	200.00	1.0871	101	70-130			
EPA 200.8 Arsenic elenium Cadmium	202.74 206.16	5.0 10	ug/L	200.00 200.00	1.0871	101 103	70-130 70-130			, .
EPA 200.8 Arsenic Selenium Cadmium Antimony	202.74 206.16 49.938	5.0 10 2.5	ug/L "	200.00 200.00 50.000	1.0871 . 0.56160 . 0.087054	101 103 99.7	70-130 70-130 70-130			
EPA 200.8 Arsenic elenium Cadmium Antimony Thallium	202.74 206.16 49.938 195.36	5.0 10 2.5 5.0	ug/L " "	200.00 200.00 50.000 200.00	1.0871 . 0.56160 . 0.087054 0.27743	101 103 99.7 97.5	70-130 70-130 70-130 70-130			
EPA 200.8 Arsenic Judinium Antimony Thallium	202.74 206.16 49.938 195.36 206.74	5.0 10 2.5 5.0 5.0	ug/L " "	200.00 200.00 50.000 200.00 200.00	1.0871 . 0.56160 . 0.087054 0.27743 U	101 103 99.7 97.5 103	70-130 70-130 70-130 70-130 70-130			
EPA 200.8 ursenic elenium admium untimony hallium ead	202.74 206.16 49.938 195.36 206.74 200.21	5.0 10 2.5 5.0 5.0	ug/L " "	200.00 200.00 50.000 200.00 200.00 200.00	1.0871 . 0.56160 . 0.087054 0.27743 U	101 103 99.7 97.5 103 99.6	70-130 70-130 70-130 70-130 70-130 70-130			
EPA 200.8 Arsenic Selenium Cadmium Antimony Challium Acead Matrix Spike (1108016-MS2)	202.74 206.16 49.938 195.36 206.74 200.21	5.0 10 2.5 5.0 5.0	ug/L " "	200.00 200.00 50.000 200.00 200.00 200.00	1.0871 0.56160 0.087054 0.27743 U 1.0380	101 103 99.7 97.5 103 99.6	70-130 70-130 70-130 70-130 70-130 70-130			
EPA 200.8 Arsenic delenium Cadmium Antimony Thallium Antinony Antimony Thallium Antinony Antinony Thallium Antinony Antinony Thallium Antinony Antinony Thallium Antinony Thal	202.74 206.16 49.938 195.36 206.74 200.21	5.0 10 2.5 5.0 5.0	ug/L " "	200.00 200.00 50.000 200.00 200.00 200.00	1.0871 0.56160 0.087054 0.27743 U 1.0380	101 103 99.7 97.5 103 99.6	70-130 70-130 70-130 70-130 70-130 70-130			
EPA 200.8 Arsenic Arsenic Arsenic Arsenic Arsenic	202.74 206.16 49.938 195.36 206.74 200.21	5.0 10 2.5 5.0 5.0 5.0	ug/L " " " "	200.00 200.00 50.000 200.00 200.00 Prepared	1.0871 0.56160 0.087054 0.27743 U 1.0380	101 103 99.7 97.5 103 99.6 Analyzed	70-130 70-130 70-130 70-130 70-130 70-130			
EPA 200.8 Arsenic celenium Antimony Thallium Antimosead Matrix Spike (1108016-MS2) EPA 200.8 Arsenic celenium	202.74 206.16 49.938 195.36 206.74 200.21	5.0 10 2.5 5.0 5.0 5.0	ug/L " " " " 9-06	200.00 200.00 50.000 200.00 200.00 Prepared:	1.0871 0.56160 0.087054 0.27743 U 1.0380 08/03/11 0.83490	101 103 99.7 97.5 103 99.6 Analyzed	70-130 70-130 70-130 70-130 70-130 70-130 : 08/11/11			
Matrix Spike (1108016-MS1) EPA 200.8 Arsenic Gelenium Antimony Challium Lead Matrix Spike (1108016-MS2) EPA 200.8 Arsenic Gelenium Cadmium Antimony	202.74 206.16 49.938 195.36 206.74 200.21 Sot 200.18 204.50	5.0 10 2.5 5.0 5.0 5.0 5.0 5.0	ug/L " " " 9-06 ug/L "	200.00 200.00 50.000 200.00 200.00 Prepared:	1.0871 0.56160 0.087054 0.27743 U 1.0380 08/03/11 0.83490 U	101 103 99.7 97.5 103 99.6 ——————————————————————————————————	70-130 70-130 70-130 70-130 70-130 70-130 : 08/11/11 70-130 70-130			
EPA 200.8 Arsenic celenium Cadmium Antimony Thallium Lead Matrix Spike (1108016-MS2) EPA 200.8 Arsenic celenium Cadmium	202.74 206.16 49.938 195.36 206.74 200.21 Sou 200.18 204.50 48.909	5.0 10 2.5 5.0 5.0 5.0 5.0 10 2.5	ug/L " " " " 9-06	200.00 200.00 50.000 200.00 200.00 Prepared: 200.00 200.00 50.000	1.0871 0.56160 0.087054 0.27743 U 1.0380 08/03/11 0.83490 U U	101 103 99.7 97.5 103 99.6 Analyzed 99.7 102 97.8	70-130 70-130 70-130 70-130 70-130 70-130 : 08/11/11 70-130 70-130 70-130			

Page 15 of 18

.,	3	•		
				•
				•
	·		· ·	
, 				



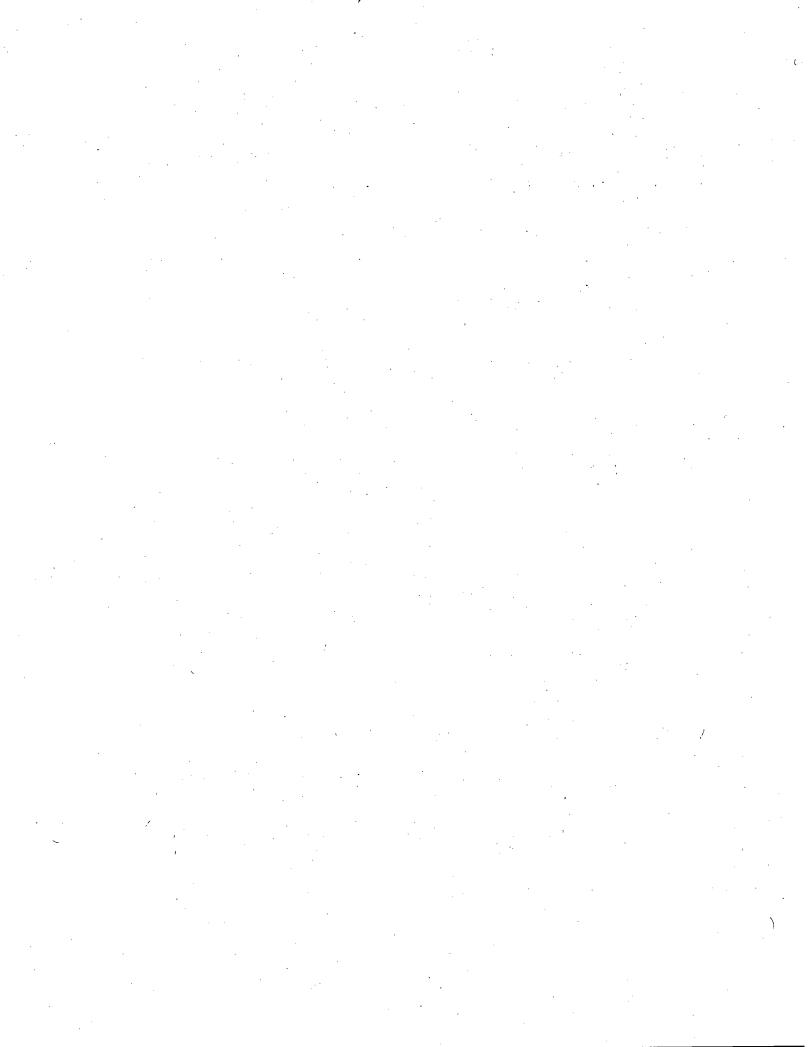
Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Total Metals (TMTL) - Quality Control US-EPA, Region 4, SESD

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1108016 - M 200.2 Metals Wa	iter									
Matrix Spike Dup (1108016-MSD1)	So	urce: E11310	8-15	Prepared:	08/03/11	Analyzed	: 08/11/11			
EPA 200.8										
Arsenic	203.10	5.0.	ug/L	200.00	1.0871	101	70-130	0.178	20	
Selenium	205.25	10	"	200.00	0.56160	102	70-130	0.444	20	
Cadmium	49.223	2.5	n.	50.000	0.087054	98.3	70-130	1.44	20	
Antimony	193.45	5.0	"	200.00	0.27743	96.6	70-130	0.984	20	
Thallium .	207.19	5.0	"	200.00	U	104	70-130	0.218	20	
ead	199.99	5.0	"	200.00	1.0380	99.5	70-130	0.109	20	
•										
Matrix Spike Dup (1108016-MSD2)	So	urce: E11310	9-06	Prepared:	08/03/11	Analyzed	l: 08/11/11			
PA 200.8										
Arsenic	197.63	5.0	ug/L	200.00	0.83490	98.4	70-130	1.28	20	
Selenium	200.40	10	H	200.00	U	100	70-130	2.02	20	
Cadmium	48.329	2.5	"	50.000	U	96.7	70-130	1.19	20	
Antimony	191.09	5.0	" .	200.00	0.29339	95.4	70-130	1.12	20	
hallium	206.79	5.0	н	200.00	U ·	103	70-130	0.652	20	
ead	200.19	5.0	"	200.00	1.7675	99.2	70-130	1.28	20	
				D	00/02/11	A1	. 00/11/11			
MRL Verification (1108016-PS1)				Prepared:	08/03/11	Anaiyzed	: 08/11/11			
EPA 200.8	0.09603			1 0000		00.6	(5.125			MDI
Arsenic	0.98602	1.0	ug/L	1.0000		98.6	65-135			MRL-
Selenium	2.0654	2.0		2.0000		103	65-135			MRL
Cadmium	0.47697	0.50	**	0.50000		95.4	65-135			MRL
			•							
Antimony	0.51639	. 1.0	н	0.50000		103	65-135			MRL.
Challiana	0.54100	1.0	,,	0.50000		108	65-135			MRL-
Thallium	0.54100	1.0		0.30000		106	05-155			WINL
ead	0.70817	1.0		1.0000		70.8	65-135			MRL
•										
• • •										
Batch 1108099 - M 245.1 Hg Wtr										
Blank (1108099-BLK1)				Prenared	& Analyze	d 08/23/	11			
EPA 245.1				ricparcu	₩ / HIMI J ZC					
Mercury	U	0.10	ug/L							
·	O	0.10	G-L			٠.				

9/1/11 17:55





Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Total Metals (TMTL) - Quality Control US-EPA, Region 4, SESD

		Units	Level	Result	%REC	Limits	RPD	Limit	Notes
	•				٠				
			Prepared	& Analyze	d: 08/23/	11			
				,		,			
2.0730	0.10	ug/L	2.0000		104	85-115			
						•			
			Prepared	& Analyze	d: 08/23/	11			
2.0960	0.10	ug/L	2.0000		105	85-115	1.10	20	
	·							:	
Sou	rce: E11310	8-13	Prepared	& Analyze	d: 08/23/	11			
			-	,					
2.0720	0.10	ug/L	2.0000	0.088000	99.2	70-130			
;	. '								
Sou	rce: E11310	9-06	Prepared	& Analyze	d: 08/23/	11			
1.7940	0.10	ug/L	2.0000	U	89.7	70-130			
Sou	rce: E11310	8-13	Prepared	& Analyze	d: 08/23/1	11			
1.9460	0.10	ug/L	2.0000	0.088000	92.9	70-130	6.56	20	
,									
Sou	rce: E11310	9-06	Prepared	& Analyze	d: 08/23/1	11			
1.8650	0.10	ug/L	2.0000	U	93.2	70-130	3.88	20	
·									. :
			Prepared	& Analyze	d: 08/23/1	11			
				-					
0.081000	0.10	ug/L			:	65-135			MRL-2, U
	2.0960 Sou 2.0720 Sou 1.7940 Sou 1.8650	2.0960 0.10 Source: E11310 2.0720 0.10 Source: E11310 1.7940 0.10 Source: E11310 1.9460 0.10 Source: E11310 1.8650 0.10	2.0960 0.10 ug/L Source: E113108-13 2.0720 0.10 ug/L Source: E113109-06 1.7940 0.10 ug/L Source: E113108-13 1.9460 0.10 ug/L Source: E113109-06 1.8650 0.10 ug/L	2.0730 0.10 ug/L 2.0000 Prepared 2.0960 0.10 ug/L 2.0000 Source: E113108-13 Prepared 2.0720 0.10 ug/L 2.0000 Source: E113109-06 Prepared 1.7940 0.10 ug/L 2.0000 Source: E113108-13 Prepared 1.9460 0.10 ug/L 2.0000 Source: E113109-06 Prepared 1.8650 0.10 ug/L 2.0000 Prepared	2.0730 0.10 ug/L 2.0000 Prepared & Analyze 2.0960 0.10 ug/L 2.0000 Source: E113108-13 Prepared & Analyze 2.0720 0.10 ug/L 2.0000 0.088000 Source: E113109-06 Prepared & Analyze 1.7940 0.10 ug/L 2.0000 U Source: E113108-13 Prepared & Analyze 1.9460 0.10 ug/L 2.0000 0.088000 Source: E113109-06 Prepared & Analyze 1.8650 0.10 ug/L 2.0000 U Prepared & Analyze 1.8650 0.10 ug/L 2.0000 U	2.0730 0.10 ug/L 2.0000 104 Prepared & Analyzed: 08/23/ 2.0960 0.10 ug/L 2.0000 105 Source: E113108-13 Prepared & Analyzed: 08/23/ 2.0720 0.10 ug/L 2.0000 0.088000 99.2 Source: E113109-06 Prepared & Analyzed: 08/23/ 1.7940 0.10 ug/L 2.0000 U 89.7 Source: E113108-13 Prepared & Analyzed: 08/23/ 1.9460 0.10 ug/L 2.0000 0.088000 92.9 Source: E113109-06 Prepared & Analyzed: 08/23/ 1.8650 0.10 ug/L 2.0000 U 93.2 Prepared & Analyzed: 08/23/	Prepared & Analyzed: 08/23/11 2.0960 0.10 ug/L 2.0000 105 85-115 Source: E113108-13 Prepared & Analyzed: 08/23/11 2.0720 0.10 ug/L 2.0000 0.088000 99.2 70-130 Source: E113109-06 Prepared & Analyzed: 08/23/11 1.7940 0.10 ug/L 2.0000 U 89.7 70-130 Source: E113108-13 Prepared & Analyzed: 08/23/11 1.9460 0.10 ug/L 2.0000 0.088000 92.9 70-130 Source: E113109-06 Prepared & Analyzed: 08/23/11 1.8650 0.10 ug/L 2.0000 U 93.2 70-130 Prepared & Analyzed: 08/23/11	2.0730 0.10 ug/L 2.0000 104 85-115 Prepared & Analyzed: 08/23/11 2.0960 0.10 ug/L 2.0000 105 85-115 1.10 Source: E113108-13 Prepared & Analyzed: 08/23/11 2.0720 0.10 ug/L 2.0000 0.088000 99.2 70-130 Source: E113109-06 Prepared & Analyzed: 08/23/11 1.7940 0.10 ug/L 2.0000 U 89.7 70-130 Source: E113108-13 Prepared & Analyzed: 08/23/11 1.9460 0.10 ug/L 2.0000 0.088000 92.9 70-130 6.56 Source: E113109-06 Prepared & Analyzed: 08/23/11 1.8650 0.10 ug/L 2.0000 U 93.2 70-130 3.88 Prepared & Analyzed: 08/23/11	2.0730 0.10 ug/L 2.0000 104 85-115 Prepared & Analyzed: 08/23/11 2.0960 0.10 ug/L 2.0000 105 85-115 1.10 20 Source: E113108-13 Prepared & Analyzed: 08/23/11 2.0720 0.10 ug/L 2.0000 0.088000 99.2 70-130 Source: E113109-06 Prepared & Analyzed: 08/23/11 1.7940 0.10 ug/L 2.0000 U 89.7 70-130 Source: E113108-13 Prepared & Analyzed: 08/23/11 1.9460 0.10 ug/L 2.0000 0.088000 92.9 70-130 6.56 20 Source: E113109-06 Prepared & Analyzed: 08/23/11 1.8650 0.10 ug/L 2.0000 U 93.2 70-130 3.88 20 Prepared & Analyzed: 08/23/11





Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Notes and Definitions for QC Samples

U	The analyte was not detected at or above the reporting limit.
B-3	Level in blank does not impact data quality
MRL-2	MRL verification for Non-Potable Water matrix
QC-5	Calibration check standard less than method control limits.
QC-6	Calibration check standard greater than method control limits.
QR-2	MRL verification recovery greater than upper control limits.
XM-1	Sample background/spike ratio higher than method evaluation criteria

	•			
		•		
	•			
·				
•				
	•			
	•			
		•	·	
t.				
	•	-		
		•		
·.				
•				
	•		·*	
				•
•				
		•		
		•. •		
	,			
		•		
•				
•				
	•	•		
,				
	•			
		•		
	,			
	•			
	·			
•		•		
			•	
	•	•		
			•	

Region 4 Science and Ecosystem Support Division UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

D.A.R.T. Id: 11-0591 980 College Station Road, Athens, Georgia 30605-2700

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres



September 1, 2011

tZEZD-YZB

MEMORANDUM

FINAL Analytical Report SUBJECT:

Project: 11-0591, Hattiesburg South Lagoon CSI

Compliance Monitoring

Jenny Sciftes FROM:

ASB Inorganic Chemistry Section Chief

Gary Bennett, Chief THRU:

Analytical Support Branch

Richard Elliott :OT

laboratory. accurate within the limits of the method(s) and are representative only of the samples as received by the explanations, please refer to the Data Qualifier Definitions included in this report. The reported results are been qualified if the applicable quality control criteria were not met. For a listing of specific data qualifiers and Report Narrative. Chemistry data have been verified based on the ASB LOQAM specifications and may have specified in writing by the data requestor have also been incorporated into the data unless otherwise noted in the (ASB LOQAM) found at www.epa.gov/region4/sesd/asbsop. Any unique project data quality objectives accordance with the Analytical Support Branch's (ASB) Laboratory Operations and Quality Assurance Manual Attached are the final results for the analytical groups listed below. These analyses were performed in

Analyses Included in this report:

Method Used:

Adding The

Total Mercury , (JTMT) sisteM istoT

Total Metals Total Metals

Eby 500.8 EPA 200.7

EPA 245.1

•	•		•		1.
•					
	ï				
			. •		
	•				,
			· .	•	
			•		
	•	. •	•		
				•	e e e e e e e e e e e e e e e e e e e
			•		t
					,
	·				
	8	•			
		•			
		•	•		•
•					
	,			•	
			•		
	• ,				
	•			•	
	•				
	•				
	,				·
		,	•	•	
		•	,		
			•		•
			•	•	
	•		•		•
		•			
•			•		
				•	
		·	•		•
			•		
	, , , ,				
			•		
	•				
	•				
	· '	<i>9</i>			
•	• •				
		•			
			:		
	,	•			
		• •			
•		en en en en en en en en en en en en en e			
			,		
			•		•
		.•	•		•
		•			
	٠,				

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY Region 4 Science and Ecosystem Support Division D.A.R.T. Id: 11-0591 Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Sciftes



Sample Disposal Policy

Because of the laboratory's limited space for long term sample storage, our policy is to dispose of samples on a periodic schedule. Please note that within 60 days of this memo, the original samples and all sample extracts and/or sample digestates will be disposed of in accordance with applicable regulations. The 60-day sample disposal policy does not apply to criminal samples which are held until the laboratory is notified by the criminal investigators that case development and litigation are complete.

These samples may be held in the laboratory's custody for a longer period of time if you have a special project need. If you wish for the laboratory to hold samples beyond the 60-day period, please contact our Sample Control Coordinator, Debbie Colquitt, by e-mail at Colquitt. Debbie@epa.gov, and provide a reason for holding samples beyond 60 days

ES:LI 11/1/6

Page 2 of 22 El 13108 TMTL FINAL

	•
	,
•	
·	
	·
	•
• .	•
•	
	•
•	•
•	
•	•
•	
	,
•	
•	
•	
•	

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY Region 4 Science and Ecosystem Support Division

Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0591

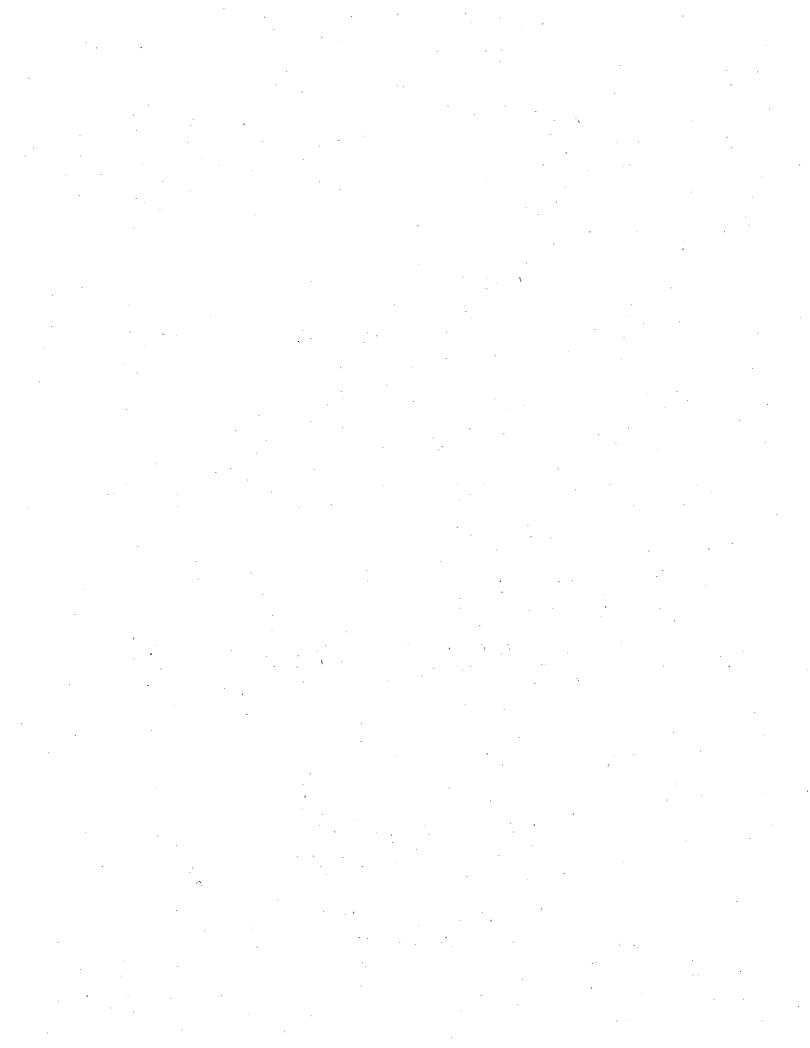


Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres

SYMPLES INCLUDED IN THIS REPORT

Project: 11-0591, Hattiesburg South Lagoon CSI

HTSO-0002
CO00-OSTH
HTSO-0029
6100-OSTH
9400-OSTH
Lt00-OSTH
8400-OSTH



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATA QUALIFIER DEFINITIONS

980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0591



Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Sciffes

. 1	The identification of the analyte is acceptable; the reported value is an estima
∀ -C	MRL elevated due to interferences.
. 1	The analyte was not detected at or above the reporting limit.

Calibration check standard less than method control limits.

VCKONAWS AND ABBREVIATIONS

	estimated concentration reported.
	spectral library. A calibration standard has not been analyzed to confirm the compound's identification or the
LIC	Tentatively Identified Compound - An analyte identified based on a match with the instrument software's mass
	quantitation. The MRL is sample-specific and accounts for preparation weights and volumes, dilutions, and moisture content of soil/sediments.
WBT	Minimum Reporting Limit - Analyte concentration that corresponds to the lowest demonstrated level of acceptable
	reported with a 99% confidence that the analyte concentration is greater than zero.
WDF	Method Detection Limit - The minimum concentration of a substance (an analyte) that can be measured and
	Note: Analytes with no known CAS identifiers have been assigned codes beginning with "E", the EPA ID as assigned by the EPA Substance Registry System (www.epa.gov/srs), or beginning with "R4-", a unique identifier assigned by the EPA Region 4 laboratory.
CAS	Chemical Abstracts Service



Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0591

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres



Total Metals

Project: 11-0591, Hattiesburg South Lagoon CSI

Г³Р ID: <u>E113108-05</u>

Matrix: Preservative Blank

Station ID:

Sample ID: HTSO-0002

Date Collected: 7/27/11 16:35

	٠,	٠,										
							9	niS	-	9-	99-0‡	'
				J.		tu	unu	qХ		ç-	ç9-0t	7
					u	muil	per	νar		7-7	79-0t	, t
						am	vine	a) [T		19-	7E-01	Ţ
						District Co.		niT		ς-	1 E-0‡	, t
						tur	oille	sdI	757	0-1	8Z-0‡	t.
					ι	mui	ijuo	Stro	-	9-	t0-24	7
						u	anq	pos		Ġ=	7-0t	t
							.19/	۸ĮİS		· †-7	t0-55	か
						um	tiuə	Jes		ζ-(61-28	Ĺ
					t	mui	isse	pot		L-0	60 - 0‡	t
							KG	oiN		0-1	t0-01	Þ.
				Ţ	wnt					L-1	86-68	t/
				11.	es.	səu	aga	вM		Ŝ-	96-68	Þ,
					ш	ınisə	əng	βM		t -:	\$6-68	t
							P	69.J		1-	76 - 68	Þ.
								lion		9-0	68-68	t/
		o e la	17			1	bbei	ЮЭ		8-)\$ - 0†	Þ.
iiii dhanaa			······································	deciments.	orwere subm	************	palt		**********	7- 8	8 †- 0t	7
				41.	u	unn	woi	CPP		ξ-	L 1- 01	Þ
constant		*	,			W	ciui	Cal		7-(0 L- 0t	t
						um	iut	Cac		67	() Ot	ţ
Name of the last	A GOLL Santon or a section is sold the		Magazina	Saltono-reso	J	шni	illy	Вет	2442 274 00FC204	L-	I <i>t-</i> 0t	7
				, i		u	UOL	Bar		£-	6E-0t	ţ,
W 210		Nervetende	nimer Pers		2276842000	erennen en	inə	*****	ameanile.	antonio marina del	8E-0t	200.00
				15 21. j	17	λuo	XUIT	inA		0-	96-01	Þ
					u	шnu	ıimı	ulA	,	ς-	06-67	t.
						χī	mai	ATA		0-	L6-68	
											-0 U	
						7)	(p)	пV			əqui	17
255 V (ES)	CATCHER STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET,	12 6 7 8	2007205VP	CONTRACTOR OF THE PARTY OF THE	3437259C	Ca. 1.3 (42)	4446255	G97528	422322349	Access of the said	CONTRACTOR OF THE PARTY OF THE	



980 College Station Road, Athens, Georgia 30605-2700 Region 4 Science and Ecosystem Support Division UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres D.A.R.T. Id: 11-0591



Total Metals

Project: 11-0591, Hattiesburg South Lagoon CSI

T'sp ID: E113108-03

Matrix: Rinse Water Blank

Station ID: Sample ID: HTSO-0005

Date Collected: 7/27/11 13:56

						,		
	EPA 200.7	95:51 11/01/8	11/50/8	10	J\gu	U 01	Sinc	9-99-0++
	EBV 700 3	95 CI 11/01/8	17:51 17:60/8	0.5	7/3n	13.0 n 210 n 210 n 210 n 210 n 210 n 210 n 210 n 210 n 210 n 210 n 210 n 210 n 210 n 210 n 210 n 210 n 210 n 2	Xinimu	5-59-0 11 2
	EPA 200.7	95:51 11/01/8	L1:51 11/£0/8	0.2	J\gu .	. U 0.2	muibansV .	7-79-0447
	EBA 200.7	95-51 11/01/8	71.21 11760/8	0.6	J/8n	n o's	muinetiT	9-78-0447
	EPA 200.7	95:51 11/01/8	LI:SI II/£0/8	۶I	J\gu	· U &I	niT	5-18-0447
	EPA 200.8	70:81 11/11/8	/b·S1 11/£0/8	0.1	J/gu	U 0.1	milledT	0-82-0447
	EPA 200.7	95:51 11/01/8	∠1∶ς1 11/€0/8	0.2	J\gu	U 0.2	Strontium	9-47-044
71	Eb∀ 500 1	95:51 11/01/8	LLSI II/E0/8	0001	7/8n	1 0001	wmipos	5-E 7- 0##L
	EPA 200.7	95:51 11/01/8	71:21 11/50/8	0.2	J\gu	U 0.2	Silver	7440 - 22-4
	EBY 500.8	70.81 11/11/8	11/20/8	0.2	J/gu	0.02	Seleminii	7-61-78LL
	EPA 200.7	95:21 11/01/8	71:21 11/50/8	1000	J\gu	. Ω 000I	Potassium	L-60-0++L
	ESV 700'1.	95.51 11/01/8	L1-\$1 11/£0/8	-01	7/3n	30 N O O	Nickel	0-70-0 11 /
	EPA 200.7	95:21 11/01/8	71:21 11/50/8	0.8	J\gu	U 0.2		L - 86-6£†L
	E5V 300 1	11/01/8 95:51	41151 11760/8	0.8	1/3n	0.03	Nisugancse	\$-96 - 687L
	Eby 200.7	95:51 11/01/8	L1:51 11/E0/8	720	J\gu	7 20 Ω	Magnesium	ヤ- \$6 - 6£ † L
	EBA 200:8	70.81 11/11/8	11/E0/8	0.1	J/gu	0.01	Lead	1-26 -6 27/
	EPA 200.7	95:51 11/01/8	71:21 11/60/8	100	J\gu	100 n	Iron	9 - 68-6£†L
	EBA 2007	95.51 11/01/8	11/E0/8	0.1	7/8n	U 01	Copper	8-05 - 011
	Eby 200.7	95:51 11/01/8	L1:51 11/60/8	0.2	J\gu	U 0.2	Cobalt	ヤ-8 ヤ-0ヤヤ᠘
	ELV 7003	95 CL 11/01/8	7121 11/E0/8	0.8	July Algu	U 0.8	Cyrominu	£-74-0447
	Eby 200.7	95:21 11/01/8	71:21 11/60/8	720	J\gu	720 N	Calcium	Z-0L-0+tL
	EBV 300.8	ZO 81 11/11/8	11/E0/8	05.0	J/gu	0 05 0 T	Cadmium .	6-E1-011/
Sector serves by	Eby 200.7	95:21 11/01/8	71:21 11/50/8	0.5	J/gu	U 0.£	Beryllium	L-14-044L
1.77	EEA 200 7	95.51 11/01/8	71:51 11/60/8	0.6	A/gu	200110Ce	Barium 1	£-6£ -01 1/
	EPA 200.8	11/11/8 11/11/8	. 74:21 11/50/8	0.1	J\gu	U 0.1	Arsenic	Z-8E - 0++L
	EBV 500.8	11/11/8	11/£0/8	0.1	J/ gu	LOO.	YuominA	0-98 - 0 11 2
	EPA 200.7	95:21 11/01/8	71.21 11/60/8	100	J\gu	U 001	munimulA	5-06-6747
	EBV 542 I	IV:CI TL/CZ/8	05:8 11/62/8	01.0		0.01.0	Mercury	9-16-6571
20020	-	11/62/8	11/62/8	ULU:				7 20 0272
100	1 роцыу	pəz.Gouy	bernqer4	WET	sjiu)	Results Qualifiers	əiQuuy	12quin _N
32000000000	A STATE OF THE STA	CONTRACTOR OF THE SECOND	A CAMPAGE AND A SECOND	CHARLES AND AND AND AND AND AND AND AND AND AND	AND THE PERSON OF THE PERSON O	A SECOND FOR COMPANY AND ADMINISTRATION OF THE PARTY OF T		CONTRACTOR STATE OF THE STATE O

•

Region 4 Science and Ecosystem Support Division UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Kegion 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0591

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres



Total Metals

Project: 11-0591, Hattiesburg South Lagoon CSI

Г³Р ID: <u>E113108-0</u>4

Matrix: Rinse Water Blank

Sample ID: HTSO-0029
Station ID:

Date Collected: 7/27/11 11:30

	11/01/8 11/01/8	71:21 11/60/8		· J\gu	33	Sinc	9-99-0+1/
EPA 200:7	EF 91 11/01/8	LL151 11/60/8	9.6	J\gu	U 0.£	wwimX	S-59-0 11 /
EPA 200.7	£\$:91 11/01/8	71:21 11/60/8	0.2	J\gu	U 0.8	muibeneV	Z-Z9-0 <i>t†L</i>
EPA 2007	£1.01/8	21:S1 11/£0/8	0.2	J/80	200	muinstiT ,	9-78-044
EPA 200.7	£#:91 11/01/8	L1:51 11/60/8	SI.	J\gu	U SI	niT	S-18 - 0447
EFA 200.8 =	11/11/8	LV:\$1 1 U:0/8	0.1	- Agu	noi	mvilladT.	0-82-011/
EPA 200.7	£\$:91 11/01/8	71:21 11/60/8	0.2	J\gu	U 0.2	Strontium	9-47-0442
E5V 500 1	11/01/8	11/60/8	1000	A\gu	A 000 L	. umipos	S-EZ-0 17 1
EPA 200.7	£\$:91 11/01/8	Δ1:\$1 11/ε0/8	0.2	J\gu	U 0.2	Silver	7440-22-4
ESV 700.8	11/11/8	11/60/8	0.0	/ ZJ/fin	0.07	Zejennum	Z-6v-78LL
EPA 200.7	£\$:91 11/01/8	71:21 11/80/8	1000	J\gu	Ω 0001	Potassium	Ļ - 60-0 <i>††</i> L
EBV 700.1	11/01/8 EV:91	11/51 11/60/8	OI	A/gu i	M 01	Діскеі	-0-20-0447
EPA 200.7	11/01/8	11/£0/8	0.2	J/gu	U 0.2	Molybdenum	L - 86-6£‡L
EDV 500 7	11/01/8	71.21 11/60/8	0.8	7/8 n	nos	Nsugancse	S-96-6E+L
EPA 200.7	£1:91 [1/01/8	71:21 11/50/8	520	J\gu	720 ∩	Magnesium	t-26-65 <i>tL</i>
EBV 700'8	11/11/8	TT/EQ/8	01	Jan	0.01	pes-T	1-26-6647
EPA 200.7	£1:91 11/01/8	∠1∶\$1 11/€0/8	100	J\gu	Ω 001	Iron	9-68 - 68†L
FPA 200.7	11/01/8	11/£0/8	01	J/m 1	<u>0</u> 01	Copper	8-05-017L
EPA 200.7	€1:91 11/01/8 - €1:91	L1:51 11/E0/8	0.2	J\gu	U 0.2	Cobalt	t-8t-0ttL
EPA 2007	11/01/8	LEST 11/E0/8	0.8	J/an	U 0.8	Chronium	E-LV-011/L
EPA 200.7	Ep:91 11/01/8	71:51 11/60/8	720	Д/gu	720 U	Calcium	7-0/-044/
EbV 7008	11/11/8 11/11/8	11/E0/8 11/E0/8	05.0	- 3 . 30 ·	0.000	Cadmium	6 Et 0ttL
EPA 200.7	£1/01/8	∠1∶⊊1 11/€0/8 :/1:€1	0.8 0.8	1√gu √1√gu	3.0 U 3.0 U	Betylium Betylium	L-17-077L
Eby 2003.	11/01/8 11/01/8 11/11/8	LI:\$1 	0.I	J\gu 1\en	U 0.1	Arsenic	7-86-0447
EbV 500 8	11/11/8	11/E0/8 LI/E0/8	0.1	J/8n	0.0.1.0.1	VnomunA	0-98-077
EPA 200.7	11/11/8 £†:91 11/01/8	11/£0/8 11/£0/8	001	J\gu	Ω 001	munimulA	5-06-6247
2 000 Vd.1	11/01/8	11/60/8			11 001		5 00 0072
E54.242.1	11/EZ/8	11/EZ/8 00:8	01.0	1/3 n	# 101.0	Mercury	9-L6-68+L
роуру	pszymuy	pswdsid	WKT	sinU.	Results Qualiflers	ગληυυν	Munder CAS

	•
·	•
	:
	:
	:
	:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY 980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres



Total Metals

Project: 11-0591, Hattiesburg South Lagoon CSI

Lab ID: <u>E113108-08</u>

Matrix: Municipal Eff. Wastewater

Station ID: <u>EFF001</u>
Station ID: <u>EFF001</u>

Date Collected: 7/27/11 14:02

	·				•		•	
	EPA 200.7	84:91	71:21 11/50/8	05	J/gu	<u>0 0\$</u>	Sinc	9-99-0++
	EBY 300.7	8#91 11/01/8	LT ST	S1	J∕gu	e no sin si	mwimY	S-S9-0++L
	EPA 200.7	87:91 11/01/8	L1:51 11/£0/8	. 57	J\gu	75 U	muibeneV	7-79-0447
	EPA 200.7	89-91 11/01/8	11/60/8	52	J/8n	72 n	muine)[T	9-75-0447
Time Assessment Section 1	EPA 200.7	87:91 11/01/8	71:51 11/60/8	SL	J∕gu	N SL	niT	5-18-0447
1 41	EPA 200.8	17.81 11/11/8	11/£0/8	0.8	1/g n	0.0%	milledT	0-82-011/
	EPA 200.7	8 1 :91 11/01/8	71:21 11/50/8	`57	J/gu	740	Strontum	9-tZ - 0ttL
	Eby 2007	87.91 11/01/8	21.51 11/20/8	2000	J∕8n	000\$6	umipos	S-EZ - 044/
	EPA 200.7	84:91 11/01/8	71:21 11/60/8	52	7/gu	72 N	Silver	4-22 - 0447
	EBY 50078	11/11/8	11/E0/8	ડા	Jan Jan	- t-diffnst	Selenium	7-6t-78LL
	EPA 200.7	84:91 11/01/8	71:61 11/50/8	0005	J/gu	120000	Potassium	L-60-0††L
	EBV 7003	87-91 11/01/8	11/E0/8	OS	1/3n	N 05	Nickel	0-20-0444
	EPA 200.7	84:91 11/01/8	71:21 11/50/8	52	7/3n	72 N	Molybdenum	L-86-6E†L
.0	EPA 2007	81:91 11/01/8	61.51 11/60/8	.52	1/80	$= \tau_{\rm c} = 10081 \mathrm{mpc} \mathrm{mpc}$	Nunganese 14 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	\$ -96-6 8\$L
and the second section of the section	EPA 200.7	81:91 11/01/8	71:21 11/50/8	1200	Д∕ З п .	18000	Magnesium	t-26-68tL
	EPA 200.8	11/11/8	74.21 11/20/8	0.2	7/8n	0.0%	Lead The state of the state of	1-26 - 6847
CONTROL DE MANAGEMENT	EPA 200.7	81:91 11/01/8	∠1∶⊊1 11/€0/8	005	7/gu	079	Iron	9-68-687
	EPA 200 7	81:01/8 81:91	11/£0/8	90	A/gu	Α.Ο.	Copper	8-05-0447
CHARLES AND COLUMN	EPA 200.7	87:91 11/01/8	71:21 11/50/8	52	J∕gu	. 22 U	Cobalt	t-8t-0ttL
	EPA 200.7	11/01/8 81:91	11/E0/8	32	J/gu	5 M 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Chromium	€-L 1-011 L
	EPA 200.7	81:91 11/01/8	L1:51 11/ε0/8	1700	J/gu	23000	Calcium	Z-0L-0++L
	EPA 200.8	17/11/8	11/E0/8	2.5	J/Sn	52N	Cadmium	6-E V- 0++L
the second	EPA 200.7	87:91 11/01/8	71:21 11/50/8	SI	. <u>J</u> /gu	U 21·	Beryllium	L-14-044L
	EPA 200.7	81-91 11/01/8	11/50/8	. 52	7/8n	-40 1° 66-2	muine	E-6E-0+14
	EPA 200.8	17:81 11/11/8 18:51	_£\$:⊊[11/€0/8	0.2	_1/gu	U 0.2	Arsenic	7-85-0447
300	EPA 200.8	11/11/8	11/80/8 11/80/8	0.6	J/gu	N 0'S	Vanimony	0-98-0++L
,	EPA 200.7	84:91 11/01/8	71:21 11/50/8	005		U 008	munimulA	2429-90-5
***	EBV 542 L	[F1] [17:7/8	05:8 11/67/8	010	/ //8 n	n oro	Метешу	9-16-6571
	-							
	роцыу	pəziqony	Prepared	WKT	stin/J	Results Qualifiers	arcjouy '	- AsquaN
C. 2000 15 8 200			NAME OF TAXABLE PARTY.		THE REPORT OF THE PARTY OF THE			CV)

	•	
	*	
	· · · · · · · · · · · · · · · · · · ·	
•	•	
,		
•		
		•
·		
	•	
·	·	
		·
		•
•		•
		•
·		
	•	
	•	
•		

Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. 1d: 11-0591



Total Metals

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres

Project: 11-0591, Hattiesburg South Lagoon CSI

rsp id: <u>E113108-13</u>

Sample ID: HTSO-0046 Station ID: INFL

Matrix: Wastewater

Date Collected: 7/27/11 14:17

7.002	EPA 2	₱5:91 11/01/8	71:21 11/60/8	10	Л ⁄ gи .	. 19	Sinc	9 - 99-0 11 2
L:007	EBV	75:91 11/01/8	12.17	3:0	J/ga	3.0 U	muintX	5-59-0 11 7
L'007	EPA 2	\$5:91 11/01/8	71:21 11/50/8	0.8	J/gu	U 0.8	muibanaV	7-79-0447
£'002	EbV 3	\$5.91 11/01/8	L1751 L1760/8	0.8	J/ga	8.2	-mujusti T	9-78-0+1/
L'003	EPA 2	₱\$:91 11/01/8	71:21 11/60/8	۶I	J\gu	USI	niT	5-16-0447
8.003	EBV	11/11/8	11/E0/8	0.1	าสแ	0.01	muilledT	0-87 - 01
L.002	EPA 2	\$5:91 11/01/8	11/£0/8	0.2	J\⁄gu	.0†1	Strontium	9-42-0447
L 000	EBV	11/01/8	11/E0/8	0001	1/gu	00067	umpo _S	7440-23-5
	EPA 2	11/01/8 11/01/8	71:21 71:21	0.2	J\gu	U 0.8	Silver	7440-22 - 4
The state of the s	EBV 7	05.81 11/11/8	15.47 15.47	7.0	- Agu	70.0	Zelenium: - Link in the link i	7-61-78LL
	EPA 2	11/01/8 11/01/8	71:21 11/60/8	8100	J∕gu	U 0018	muissatoA	L-60-0++L
L 007	EBV	15:91 11/01/8	21:S1 11/E0/8	01	J/ŝa	nor	Mickel Willer	0-20-0447
	EPA 2	16:54 11/01/8	71:21 11/£0/8	0.2	J\gu	U 0.2	у ојурдепит	L-86-6E†L
	ENV	11/01/8	11/£0/8	0.8	J/8n	001	Manganese	\$-96-6E#L
	EPA 2	11/01/8 11/01/8	L1:51 11/60/8	250	J∕gu	3200	Маgnesium	t-26-65tL
Secretaria de la constanta de	EBV 3	11/11/8	74:51 11/20/8	0.1	J/gu	。	Pead beat	1-26-65+7
Section of the section of the second Colors	EPA 2	\$5:91 11/01/8	L1:51 11/E0/8	100	J\gu	0091	Iron	9-68-6574
A. S. Santilla Communication of the control of the	EPA	16/01/8 16/01/8	11.51 11.50/8	01-		07	+ Copper	8-05-011/
- Printering Statement Parket In	EPA 2	11/01/8 +c:01	71:21 11/£0/8	0.8	J\gu	U 0.2	Cobalt	t-8t-0ttL
CONTRACTOR STATE OF THE PARTY AND ADDRESS OF T	EBV 3	11/01/8-1 15/01/8-1	11/E0/8 / 1:51	0.2	- 2- 1/gu	0.02	Chromium,	E-LV-011L
	EPA 2	⊅\$:91 11/01/8 ••••••••••••••••••••••••••••••••••••	L1:51 11/60/8	520	J\gu	14000	Calcium	7-07-0447
	EbV	0£81 11/11/8 ts:91	11/E0/8 21/E0/8 21:51	05.0	7/8a	# 10.00 O	Cadmium 11 T	6-Et-0tt/
	Eby 3	₱5:91 11/01/8 ₱5:91	LI:SI LI/E0/8 LI/E0/8	0.8 0.8	1/3u 1√3u	. 6-39, Q € 3.0 U	Beryllium	L-14-044L
Contract of the Contract of th	EbV 3	#5-91 #1/01/8 06:81 11/11/8	11/60/8 Lt:51 11/60/8	A	J\gu	0.I	Arsenic	A CONTRACTOR OF THE PARTY OF TH
	Eby 3	11/11/8 08:81 11/11/8	Lt:ST	0.1	Maria (1/3n maria)	01 177-14-001	YnominA 2iges:1	7-86-0447
2524 (2.22.22.22.22.22.22.22.22.22.22.22.22.2	EbV 5	11/11/8 t5:91 11/01/8	11/20/8 L1:51 11/20/8	001	7 /3n	026	munimulA	the all and the second
	- CDV	11/01/8	11/60/8					2429-90-5
1.51/2	ELV	11/62/8	0C8 11/67/8	01.0	J\§u	A OTO	уусьст.	9- <u>L</u> 6-6EbL
p o	уру ј	ว <i>อริ</i> ญขน _ั	Prepared	WKT	siinU	Results Qualifices	sydput.	Anmpse CVS

				•		
				•		
			•			
					•	
			,		•	•
•	•	•				
1						
٠						
			4			•
			c			
			•	•		
				:		
						,
,		2	• ,			,
						•
			•	,	•	
	•		· .			
,						
						•
			•			•
		•				•
			•		. ,	
					. `	
						,
		•	•			
						,
		•				
			•			
				√		
•		•				
. '				•		
			•			
				•		
		,				
						•
			A			
		•				
			•			•
1						
,		7.				
			•			
		•	• •			
			1	•	√	

Region 4 Science and Ecosystem Support Division UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

D.A.R.T. Id: 11-0591 980 College Station Road, Athens, Georgia 30605-2700



Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres

Total Metals

Project: 11-0591, Hattiesburg South Lagoon CSI

Matrix: Wastewater Lab ID: E113108-14

Station ID: INFL Sample ID: HTSO-0047

Date Collected: 7/27/11 13:31

9-99-0+1	Zinc	720	J∕gu	05	11/£0/8	65:91 11/01/8	EPA 200.7
\$-59-0 11 /	rmithY	nsı	J/∄n	ST	11/E0/8	65:91 11/01/8	ELV 200.7
7-79-0447	muibene∨	· SZ	J\gu	52	11/£0/8	65:91 11/01/8	EPA 200.7
9-78-044	. anvioesi T	30	7/3 n	52	11/60/8	65.91 11/01/8	Eb∀ 700.1
S-18-044L	niT	n sl	J\gu	SL	71:21 11/50/8	65:91 11/01/8	EPA 200.7
0-82-011/	muillad).	0.0%	J/gu	0.5	11/E0/8 74/21	80.61 11/11/8	ELA 2008
9-47-044	Strontium	0†6	J\gu	52	ΔΙ:ŚΙ ΙΙ/£0/8	65:91 11/01/8	EPA 200.7
2-62-0447	unipoS .	740000	T/dn	0005	11/51	65-91 11/01/8	Eby 200.7
7440-22-4	JavliZ	25 U	J\gu	52	71:21 11/50/8	65:91 11/01/8	Eby 200.7
- 7-61-78LL	Sejeumu	⊬a't 'a s∠	J/gu	SL.	11/E0/8	80:61 U/II/8	EPA 200.8
L-60-0++L	muissatod	1100000	J\gu	2000	71:21 11/50/8	65:91 11/01/8	EPA 200.7
0-20-011/	Mickel	19 19 19 19 19 19 19 19 19 19 19 19 19 1	J/gu	0S	11/E0/8	65:91 11/01/8	EBV 700 1
L-86-6E†L	Molybdenum	† £	J∕gu	52	71:21 11/£0/8	65:91 11/01/8	Eby 200.7
S-96-6EVL	Manganese	f _{a.} r	J/gu	52	L1:51 11/£0/8	65:91 11/01/8	EBV 500 1
t-26-65 <i>t</i> L	Magnesium	130000	- 1\gu	1200	71:21 11/50/8	65:91 11/01/8	EPA 200.7
1-76-65+1	Lead	0.0%	मृ क्षा	0.8	11/20/8 11/20/8	\$0.61 11/11/8	EBV 300.8
9-68-6E <i>†L</i>	Iron	006\$	J∕gu ·	005	11/£0/8	65:91 11/01/8	EPA 200.7
8-05-011	Copper	530	J/gu	0\$	11/20/8	65:91 11/01/8	EBV 500 1.
t-8t-0tt <i>L</i>	Cobalt	U 22 I	J\gu	52.	11/£0/8	65:91 11/01/8	EPA 200.7
E-Lt-0ttL	Chromium +	10 SZ (1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1	J∕gu	52	11/E0/8	65.91 11/01/8	EBV 7003
Z - 0 <i>L</i> -0 <i>t</i> † <i>L</i>	Calcium	340000	J\gu	1200	71:21 11/50/8	65:91 11/01/8 ,	EPA 200.7
6-64-0447	Cadmium	0.52	n6∖r.	5.2	11/E0/8	80-61 11/11/8	EBV 700.8
L-It-0ttL	Beryllium	nsı	J∕gu	SI	11/£0/8	65:91 11/01/8	Eb¥ 500.7
£-6£-0+1/	Barium	260 J, QC-5	J ∖gu	172	11/£0/8	69-91 11/01/8	ESV 300.7
7-86-0447	Arsenic	U 0.2	J∕gu	0.2	74:21 11/50/8	80:61 11/11/8	EPA 200.8
0-98-0447	Antimony	10 0 S	J/gu	0.8	11\£0\8 \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	80.61 11/11/8	EBV 500.8
S-06-67 <i>tL</i>	munimulA	0001	J\gu	200	71:21 11/50/8	65:91 11/01/8	EPA 200.7
9-16-6811	Necm's	F 0.01.0	7/ 3 n	01.0	05.8 11/£Z/8	15.61	EBY 542 I
7 LO OEVL	Anticopy .	TI VIIV	10.00	VI V	11/62/8	11/62/8	The state of the s
19quan _N	Analyte	sanfipno synson	stinU	WBT	pəmdəid	pazAjouy	у роуюју

						.*	
N							
					·		
				:			
					•		
				• •			
	•	· ·					
					,		
					•		
		. •		•			
			•	·			•
		•					
•							
				•.			
			.,	•			
				•			
						٠.	
				`			
				•			
				• • • • • • • • • • • • • • • • • • • •			
						•	
				٠.			
· .			•		,		
	•					. •	
		٠.					
. · · · · · · · · · · · · · · · · · · ·				•			
		•				, .	
	:						
	·	,					
		•					
•							
							•
•				•			
	•			•			
			÷ ,				
	•		• ,				
				•		· .·	

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Sciffes

Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. 1d: 11-0591



Total Metals

Project: 11-0591, Hattiesburg South Lagoon CSI

Lab ID: E113108-15
Matrix: Wastewater

Station ID: <u>INFL</u>

Sample ID: HTSO-0048

£1.£1 11/10/1 .botoollo2 oto

६१:६१	TT//.7//.	:paraallo:	Date (

				•						
	EPA 200.7	90:71	11/60/8	10	J\gu	76		Zinc	9-99-011/	
	EBY 300'1	90:41 11/01/8	11/E0/8	0.5	A/gu	,00ε		mmintY	5-59-0 11 7	
	EPA 200.7	90:71 11/01/8	71:21 11/50/8	0.8	J\gu	U 0.2		muibanaV	7-79 - 0 1 1	
4	EBV 300 1	90:71 11/01/8	21:51 11/60/8	0.6	J)gu i	200		muinaiT	9-75-0447	
	EPA 200.7	90:71 11/01/8	71:21 11/80/8	SΙ	· Д/gu	U S I	, ,	niT	5-1E - 0447	
4.3	EBA 200.8	21.61 11/11/8	11/20/8	0.1	J\gu	10 O T		muilledT	0-87-0447	
	EPA 200.7	90:71 11/01/8	71:21 11/50/8	0.2	J/gu	0 L7		Strontium	9-47-0447	
	Eby 500 1	11/01/8	11/20/8	0001	J/gu	110000		mulbog	5-EZ - 0 11 L	
	EPA 200.7	11/01/8 11/01/1	71:21 11/50/8	0.2	- Д/gu	U 0.č		Silver	7440-22-4	
	EBV 700.8	L1 61 11/11/8	27 S1 11/20/8	0.2	-n- √/8n	70 A		Selenium	7-6t-78LL	
***************************************	Eb¥ 500.7	90:71 11/01/8	L1:51 11/£0/8	00007		. □ 00000		muissatoA	L-60-0++L	
1	EBV 700'L	11/01/8	LI SI TIZEOZ8	01	7/8n	r≢ ∥nor,		Mickel	0-70 -011 2	
	EPA 200.7	90:71 11/01/8	71.21 11/50/8	0.2	J\gu	. '81		Molybdenum	L-86-6E+L	
	EPA 200.7	90:71 11/01/8	L151 11/60/8	0.6	a/gu	150		Manganese	\$ -96-6 E#L	
THE PROPERTY OF	Eb¥ 500.7	90:71 11/01/8	L1/E0/8	520	J\gu	00 <i>LS</i>		Magnesium	t-26 - 68t/L	
	ELV 700'8	11/11/8	11/50/8	0.1	7/8a	0.1	100 March 100 Ma	bead	1-26-6877	
5 m	Eby 200.7	90:71 11/01/8	LI:SI II/E0/8	100	J∖gu ·	1900		Iron	9-68-6872	
	EbV 5007	11/01/8 11/01/8	11/20/8	01	-1/an	168		Copper	8-05-0 11 2	
	EPA 200.7	90:71 11/01/8 90:71	L1:51 11/20/8 L1:51	0.8	. Д/gu	U 0.2		Cobalt	t-8t-0ttl	
alkin.	EPA 200.7	11/01/8	11/60/8	0.6	- 5. 1/3n	nos		Chromium	E-LV-0VVL	
i Ones a second	EPA 200.7	90:41 11/01/8	L1:51 11/20/8	720	7/3n	17000		Calcium	7-0 <i>L</i> -0 <i>t</i> + <i>L</i>	
100 m	EPA 200.8	11/11/8 90:/ I	27-51 11/60/8	05.0	7 /8 n	n 0\$ 0	STATE AND SERVICE	muimbs	6-E1-011/	
	EPA 200.7	90:41 11/01/8	L1:51 11/20/8	0.8 0.8	Д/gu	73.), QC-5 3.0 U		Beryllium	L-14-044L	
	E5V 200 1	90-61 11/01/8 /1:61	£1:\$1 11/£0/8 /b:\$1	District Co.	1/3 n	the Charles of the Carles of t	31.51	Barium	2-05-011/	
Beer.	Eby 200.8	41:61 11/11/8 41:61	LV:51 LV:51 LV:51	0.1	Д/gu	() () () () () () () () () ()	***	Antimony	7-86-0447	
22.2	EFA 200.8	11/11/8	11/60/8	Reflection and a	7 /3 n			Landa Palakeria Angel	0-98-044	
· .	EPA 200.7	90:71 11/01/8	11/60/8 11/60/8	100		0£9		munimulA	S-06-67 <i>t</i>	
	ELV 542 I	TI/EZ/8	05:8 11/62/8	01.0	7/8n	U01.0		Метситу	9-L6-6E+L	
	Метьов	pazájouy	banagara ,	'MKT	siinU	Results Qualifiers		əjiqouy	Todani Vumber	

					•		•	
							,	
	•	1. 5.		,		. ,	,	
							•	
		•			•			•
						*		
					•			
٠.		,			•		* 7	
. *								
			*				,	
		•			:			
•			***					
			•					
	•	N						
		*					7.	
						:		•
		• •					:	
	•	,				,		
		·	*					
	•							
	4 · · · · · · · · · · · · · · · · · · ·					., .		•
			•		• • • •			
		,		•		•		
	e e e e e							
				:				•
	7			:	Company of the Compan		1	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
						· · · · · · · · · · · ·		
		•						. , , , , , ,
						. *	• .	•
							()	
						e de la companya de la companya de la companya de la companya de la companya de la companya de la companya de		
					and the second	•		
	*				,			,
			• • • • • • • • • • • • • • • • • • • •		W.			•
	· Production of the second							,
		·		3				
	· · ·							
			*					5 *
	· · · · · · · · · · · · · · · · · · ·			,			· · · · · · · · · · · · · · · · · · ·	•
						•		
		•		2				
			The second second					•
							•	•
		1						
							•	
				1		1		
					e de la companya de l			•
		•	•	: :			•	
		•	* . *					
					•			
					s			
	1.8							
			· .		•	***		
			- -	•				
	•	•					•	
					1			
		• .			•			
•						*		
			, , , , , , , , , , , , , , , , , , ,					
							and the second second	

Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700



Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres

Total Metals (TMTL) - Quality Control US-EPA, Region 4, SESD

nalyte	Я	Result	итосря піЛ	stinU	Zbike Sourc	%REC Limits		RPD Limit	Notes
W 200.2 M - 2108011 date	als Water								
lank (1108015-BLK1)					Prepared: 08/03/	Analyzed: 08/10/11	11/0)	
7.002 Aq		••		•					••
ilver		Ω	ς	л/ 8 п					Ω
.tzeuic		n	;						Ω
muire		n	ς .	μ					Ω
cryllium		Ω	ε						Ω
oton		Ω.	,	u					Ω
muimbe		U	ς	**	*				Ω
obalt		N	S						n ·
угошіпш		U	ς						Ω
obber		U.	- 						U
Jojàpqeunu		n	S						Ω
ıickel		n.							Ω
ead		U.	:						Ω
Yuomin		n	,						U .
muinələ		Ω	,						Ω
uį	•	n							U.
muinou		U	S						Ω
muinsti		Ω	ç	# 1					Ω
muilled		, N					•	,	Ω
muibens		U .	E S	4					U U
mım		. n		4					WRL-2,
inc		0				•			U U
munimul	•	U	I	"					U
yanganese		Ω	S						Ω
muiɔls		Ω	57						U .
muizəngah		Ω	7						. N
uo		Ω	I						Ω
muibo		Ω	100	14					Ω

Potassium

		- g P
·		
	· · · · · · · · · · · · · · · · · · ·	•
		•
		h
:		
		•
		•
		•
en en en en en en en en en en en en en e		
•		
·		
·		
•		
•		
•		

Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700



Analyte

Batch 1108015 - M 200.2 Metals Water

D.A.R.T. 14-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres

Total Metals (TMTL) - Quality Control US-EPA, Region 4, SESD

stinU

Limit

Reporting

Гече

Spike

	11/01/80:1	l Analyzed	Prepared: 08/03/1				FC2 (1108012-B21)
,	<u> </u>						EPA 200.7
	82-112	. 001	00.001	_Ղ/ Յ Ո	0.8	100.22	Silver
	\$11-58	5.76	00.002		05	£0.261	Arsenic
	82-112	£.76	00.002	u	0.2	75.461	Barium
, .	82-112	8.66	000.02		3.0	L16.64	Beryllium
n .	82-112			4	90	Ω	Вогоп
	82-112	0.26	000.02	u	0.8	S6t.7t	Cadmium
	\$11-58	6.56	00.001		0.2	898.66	Cobalt
	82-112	7 .86	00.002		0.2	L8 96I	Chromium
	\$11-58	€.86	100.00		01	26.392	Copper
	\$1,1-28	101	100.001		5.0.	101.20	Molybdenum
	\$11-\$8	0.86	200.002	4.	01	20.961	Nickel
	\$11-58	0.26	00.002		70	190.02	Lead
	\$11-58	9'66	200.00		01⁄2	71.991	AnomitnA
	\$11-58	101	200.002		St	202.72	Selenium
	\$11-58	501	100.00		SI	18.401	. uiT
	\$11-58	\$ 66	00.001		0.8	894.99	Strontium
	\$11-\$8	701	00.001		0.2	21.201	minajiT
	\$11-58	0.06	200.00	; <i>;</i>	30	70.081	muilledT
	\$11-58	9.86	100.00		0.2	L79.86	тизапад
	\$11-58	9.76	100.00		3.0	165.76	muimY
	\$11-58	2.86	200.002		01	24.361	Zinc
	\$11-58	101	0.0002		100	9.2812	munimulA
•	\$11-58	701	00.002		0.8	99.808	Manganese
•	\$11 - \$8	10t	0.0002		750	5.9025	Calcium
	511-58	<i>μ</i> οι <i>μ</i> οι	0.0002	#	057	6.7252	Magnesium
•	\$11-58	101	0.0002		1000	2,223,2	non
	\$11-58	103	10000	44	1000	10322	unipos

1000

Limit

RPD

RPD

Limits

%KEC

%EEC

Result

Source

Notes

811-88

£.79

4.8279

Potassium

•	* ************************************	
·	۴.	

Region 4 Science and Ecosystem Support Division UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

980 College Station Road, Athens, Georgia 30605-2700



Analyte

D.A.R.T. Id.: 11-0591 Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Sciffes

Total Metals (TMTL) - Quality Control US-EPA, Region 4, SESD

Limit

Reporting

Result

8015-MS1) Source: E113108-15 Prepared: 08/03/	Matrix Spike (110
	T.002 A¶3
U 00.000 " 50 ug/L 100.00 U	Silver
0° 00.007 " 0° 86.972	Arium
	Barium
Ω 000.02 " 0.ε 99.522 Ω 000.02 " 0.ε 99.522	Beryllium
U 000.00 " 0.2 27.02	Boron
EEO I 00'00I " 0'S 06E'66	Cadmium Cobalt
700.00 " 2.0 " 200.00 U	Сһготіпт
25.85 00.001 " 01 14.91	Copper
152.00 5.0 100.00 18.27	Molybdenum
700.00 3.884	Nickel
Ω 00.002 " 02 78.002	Lead
Z10.08 40 " 200.00 U	YnominA
U 200.002 " 24 200.00 U	Selenium
U 00.001 " 21	riT.
387.63 " 0.000 " 266.9	Strontium
108.33 5.0 " 100.00 4.820	muinstiT
181.84 30 " 200.00 U	muilledT
U 00.001 " 0.2 ET.201	murbensV
104.42 3.0 " 100.00 1.205	muittY
307.31 10 " 200.00 92.34	Zinc
8,926 0,0002 " 001 0,6706	munimulA
Z.311 00.002 " 0.2 86.243	Manganese
7500.0 I 755°C I 750°C I 755°C	Calcium
. 7500.0 ° 0000 ° 0000 ° 0000 ° 00000 ° 00000	Magnesium
.8621 0.0002 " 001 9.2507	uoл
87581 00001 " 0001 82082 87501 00001 " 0001 009611	muibo2

ES:LI 11/1/6

Limit

KPD

RPD

Limits

%KEC

%KEC

Kesnlt

Source

Level

Potassium

			•	
		•		
			1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	
		<u> </u>		
		e de la companya de l		
		•	•	
"				
			•	
	4			
				٠
			•	
			· · · · · · · · · · · · · · · · · · ·	
		. •		
$(x_1, \dots, x_n) \in \mathbb{R}^n \times \mathbb{R}^n$				
·				
•				
			• .	

980 College Station Road, Athens, Georgia 30605-2700 Region 4 Science and Ecosystem Support Division



Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres D.A.R.T. Id: 11-0591

US-EPA, Region 4, SESD Total Metals (TMTL) - Quality Control

Reporting

Analyte		Result	Limit	e tinU	Level	Kesult	%KEC	Limits	RPD	Vimit No
Satch 1108015 - M 200.2 Met	tals Water									
Matrix Spike (1108015-MS2)	1	inos	ce: E11310	90-6	Prepared:	11/80/80	Analyzed	11/01/80		
7.002 Aq										
ilver		888.96	0.2	7/8n	100.00	Ω	6.96	70-130		
vsenic		84.261	90		200.00	Ω	2.96,	0£1-0L		
muins		04.722	0.2	**	200.00	31.215	1.86	061-07		•
get Allium		. 600.08	3.0		000.02	Ω	100	061-07		
noro		149.22	05			LITSI		70-130		
muimbe		906.44	0.2	"	000.02	U.	8.68	061-07		
ledo		92.336	0.2		100.00	'n	5.26	061-07		
muimord		188.90	0.2	4	200.00	Ω	5.49	70-130		
obber		71.201	10	. 4	100.00	8.1542	0.76	061-07		
уојурдепит		98.101	0.2	μ	100.00	3.9059	0.86	061-07		
Jickel		58.681	01		200.00	2.5140	7.56	061-07		
pea		, 7£.78I	07		200.00	Ω	7.56	70-130		
Antimony		193.25	0 <i>t</i>		200.00	Ω	9.96	70-130		
minale		67,602	St		200.00	Ω	501	0£1-0L		
uij		602.86	SI		100.00	n	2.86	061-07		
noutinm		14.862	0.2		100.00	74.741	0.19	061-07		
muinsii		10.201	0.2		100.00	. U	701	70-130		. 1.
րայլլա Միջվյա		95.47I	30		200.00	n	€.78	061-07		
muibans		899.76	0.8		100.00	U.	<i>T.</i> 76	061-07		
wninn		\$ 09.96	3.0		100.00	80222.0	€.96	061-07		
inc		24.122	01	-	200.00	20.541	100	061-02		
ипишту.		1.9912	100		0.0002	26.141	100	061-02		
्राष्ट्रिया है। श्रृष्ट्राच्या		£2.132	0.5		00.002	802.77	8.96	061-02		
Calcium	•	7 tova	. 720		0.0002	78411	2.19	0£1-0£		
muisəngsiv		9.5648	720		0.0008	7.7855	102	70-130		

1000

1000

100

KPD

%KEC

Source

Spike

70-130

70-130

70-130

6.06

9.28

103

19901

20154

513.73

10000

10000

0.0002

15961

64383

2.5232

Potassium

muibo2

		;	•
		•	
	·		
			• .
* .			•
	· •	•	
			•
			•
			1
		· .	
			•
		• •	
		•	• '
			•
			•
		•	
	·	' .	•
		•	
	•	•	
			,
		,	•
		· ·	
	•	•	•
			•
	•	•	·
		e e	
•		•	

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0591

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres



Total Metals (TMTL) - Quality Control US-EPA, Region 4, SESD

stinU

Limit

Reporting

Result

M 200.2 M 200.2 M 2015 - M 200.2 Metals W Matrix Spike Dup (1108015-MSD1)		ce: E113108	\$1-8	Prepared:	11/80/80	Analyzed	11/01/80 :1			
7.002 Aq										
ilver	876.86	0.8	7/3 n	100,00	Ω	0.66	70-130	82.2	70	
rzeuic	202.30	05		200.00	Ω	101	051-07	٤0 ل	07	
muire	26.232	0.8	u	200.00	. EII'EL	t [.] 96	70-130	38.£	70	
ctAllium	048.02	9.ε		50.000	Ω	102	70-130	3.02	70	
noio	97.7 <u>5</u> 1	0\$			131.14		70-130	16'7	07	
unimpe	746 44	0.8		50.000	U	6.86	70-130	SL.4	07	
obalt	£0£.49	0.8		100.00	8££0.1	£.£6	70-130	52.2	07	
ургошиш	18.891	0.8	4	200.00	n .	. L'96	70-130	9p.2	07	
obber	139.60	01.		100.00	172.85	101	70-130	£T.E	07	
γοjλρqeunw	\$9.711	0.8		100.00	272.81	4.66	70-130	90.9	07	
lickel	£4.291	01	-	200.00	3,8845	8.26	70-130	£8.8	07	
લ્યવ	£8.091	07		200.00	n	4.29	051-07	51.2	07	
νιιιωουλ	26.761	01⁄2		200.00	n n	0.66	70-130	96.₹	0Z	
elenium	72.512	St		200.00	n	401	051-07	71.2	oz oz	
, u <u>i</u>	££9.49	SI		00.001	U	9.46	051-07	72.57	20	
rontium /	68.88£	0.8		00.001	06.992	7.88	051-07	££.7	07	
muinsii	89.201	0.8		00.001	4.8200	. 101	051-07	74.2	07	
muilled	09'941	30	4	200.00	n	£.88	051-07	26.2	02	
wnipeue/	94,001	0.č		100.00	Ω	001	051-07	11.8	ÖZ	
wnim	989.86	9.E 10		100.00 200.00	1.2053	5.76	051-02	59.č	07	
inc	L'6085	100	*	0.0002	245.26 28.623	100	0£1-0Z 0£1-0Z	84.4 84.4	70 70	
munimul	55.213	0.8	44	00.002	52.311	8.66	0£1-07	98.4	70	
ुर्यटागम्प प्रचारित्रगटरट	21525	720	*	0.0008	17257	£.28	70-130	51.2	70	
muisənga វិទិញខេត្តបាយ	91801	720	14	0.0002	L.T332	103	70-130	10.8	07	
uo.	8.4289	100	**	0.0002	9'8651	102	70-130	\$0.E	50	
шпіро	112430	1000		10000	105280	4.17	70-130	81.8	70	I-MX
muissato	88072	1000	u	10000	18242	4.28	70-130	14.5	70	

Limit

RPD

KbD

Limits

%KEC

%KEC

Result

Level

Spike

Notes

	•
	••
,	΄,
	•
	•
•	
•	
·	
·	
	÷
	·
	•

D.A.R.T. Id: 11-0591 980 College Station Road, Athens, Georgia 30605-2700 Region 4 Science and Ecosystem Support Division



Analyte

US-EPA, Region 4, SESD Total Metals (TMTL) - Quality Control

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres

ain∪

Limit

Reporting

Result

						-			ater	Wetals W	.002 M - 21	Batch 11080
			11/01/80 :	Analyzed	11/80/80	Prepared:	90-6	: E11310	Source	2-WSDS)	108011) quQ	Matrix Spike
	07	3.75	UEIUL	101		100.00	. 1/511	0.5	65.001			7.002 A93
	07	69.£	70-130	6.66	n n	200.00	1√Ձս	0.č 0č	27.991			Silver .
	70	62.I	70-130	9.66	212.15	200.00	**	0.8	730.32			
	0Z	80°I	70-130	101	U U	20.000	"	3.0	755.05	٠		Barium
	70	18.2	70-130	101	LI:#SI	000.00	 .	05	84.621		1.0	Boron Boron
	07	89°S	70-130	1.29	U	000.02		0.8	152.74			Cadmium
	70	21.4	70-130	2.96	n	100.00		0.8	522.96	•		Cobalt
	70	\$8°\$	70-130	001	n	200.00	4	0.8	67.002		•	Chromium
	07	17.2	70-130	6.99	8.1542	100:00	44	01	90'801			Copper
	70	15.4	70-130	103	3.9059	100.00		0.8	95.301			Molybdenum
	70	4.20	70-130	<i>T. T</i> 6	2,5140	200.00		01 .	198.00			Nickel
	70	82.4	70-130	8.79	U	200.00	. "	70	72.29I			Lead
,	70	18.8	70-130	102	U	200.00	и.	01	204.88			Antimony
	70	1.36	70-130	103	U	200.00	. "	54	94.902	•		Selenium
	20	£4.7	70-130	901	U	100.00	. 4	SI	6L.201			niT
	. 07	06.1	70-130	9.86	147.42	100.00	. "	0.8	242.98			Strontium
	70	87.2	70-130	102	IJ	100.00		0.2	104.89			muinstiT
	70	10.8	70-130	9.46	U .	200.00	ti .	30	21.681			muilladT
	70	61:4	70-130	102	U	100.00		0.8	28.101			muibansV
	òς	1.53	70-130	8.79	80225.0	100.00	. 4	3.0	660.86			muittY
	. 07	€9.€	70-130	105	145.02	200.00		10	09.622			Zinc
	20	76.2	70-130	104	141.92	0.0002	. #	100	6.1252			munimulA
	07	₹9.€	70-130	101	802.77	500.00	a	0.8	282.42			Manganese
,	02	2.76	70-130	100	11487	0.0002		720	£6 1 91			Calcium
	02	28.2	70-130	701	T.T8EE	0.0008		. 520	8.8£78			muisəngaM
,	20	2.58	70-130	901	513.73	0.0002	u	100	2.1082	٠,		Iron
									,			., -

1000

1000

20384

69199

Potassium

muibo2

70

70

Limit

RPD

Notes

Limits

%KEC

%KEC

Result

Source

Level

2bike

RPD

70-130

70-130

717.

2.86

100

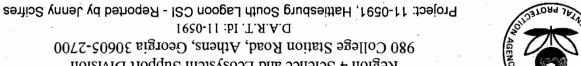
19501

20154

10000



980 College Station Road, Athens, Georgia 30605-2700 Region 4 Science and Ecosystem Support Division.



Result



Analyte

Batch 1108015 - M 200.2 Metals Water

US-EPA, Region 4, SESD Total Metals (TMTL) - Quality Control

LinU

Limit

Reporting.

Level

Spike

Potassium		1021.0	1000		0.0001	701	0EI-07		MRL-2
muibo2		1.2551	1000		0.0001	133	0£1 - 0 <i>L</i>		ОВ-7 МВТ-7
Lon		51.011	100	. "	100.00	110	051-07		WET-5
Magnesium	· · · · · · · · · · · · · · · · · · ·			**					-
muisanseM		273.50	720	. ,	250.00	601	70-130		МК Т -2 ОК-2
Calcium		329.18	720		220.00	135	70-130		WKT-7
Manganese		6251.2	0.8		0000.8	103	70-130		WKT-5
munimulA		119.29	001 7		00.001	611	70-130		WKT-7
Sinc		018.01	01		000.01	SOI	70-130		WET-5
Wttrium		3.1892	0.ε		3,000	901	051-07		WKT-5
			0.0	•	υσου ε	701	001 02		n
muibene V		4.2505	0.8	u	0000.8	0.88	70-130		MRT-7
						:			Ú
muilledT		. L9L 87	30	, 4	30.000	6.89	70-130	•	MKT-7
muinetiT		98€0.≷	0.8	"	0000.8	101	70-130		MRL-2
Strontium		6£ 1 5.8	0.8	, H	0000.8	111	70-130		WKT-7
niT .		15.374	. 51		15.000	102	70-130		WBT-5
Selenium	•	791 05	St	4	45.000	112	. 0E1-0L	-	MRT-2
ynomitnA		174.04	0 †	*	000.0₽	101	70-130		MRL-2
DP2/T		001:01	07		000:07	0:00	051.04		Ú.
Lead		821.91	, 50	. 4	20.000	8.89	70-130		MRT-7
Nickel		872.11	10		. 000.01	911	70-130		MRL-2
Molybdenum		11.234	0.8	4	10.000	211.	70-130		MRL-2
Copper		10.100	10		10.000	101	70-130		WBT-7
Сһготіпт		1810.2	0.8		0000.8	101	70-130	•	MRT-2
Cobalt	•	5.1286	0.8	4	0000.8	103	70-130		MKT-7
Cadmium		7L96't	0.8		0000 \$	£'66	70-130		U MRT-2,
Boron		980.12	05	**	0000 \$	701	051-07		WKT-7
Beryllium				44					
–		1470.£	3.0		3.0000	701	70-130		MRL-2
Barium		4550.9	0.8	" .	0000.2	121	70-130		WBT-7
Arsenic		161.54	05		000.02	9.16	70-130		л ИКТ-3
Silver		0805.2	0.8	J\gu "	0000.2	011	051-07		WET-5
T.002 A93		00033	0 3	D	0000 3		001 02		Cidre
MRL Verification (1	(154-5100011)	· ·			Prepared: 08/03	יייי אוומוא דריי	11/01/00 'T	-	

Limit

RPD

Notes

Limits

%EEC

%KEC

Result Source

КЪD

						,				
		*								
	٠.					•				
					~					
						•				
			•							
			•				,			
•								4		
						-				٠.
•					,					
			-	•						
								•		
	•				٠,	. ,				
-				•				•		'
•										
				•						
•										
							•	* 2.1		
•							•	•		
	•		•						٠.	
			-	.'						
		•		;	•				•	
									3 1	
-					N.	,			.) · · ·	
			•				•			
•			•		•					
							•	•	•	
					•				•	
				•				•		,
								• :		. '.
						•				
	•									
•				•			•			
•							•			
		•			•					
			٠.							•
٠.		•	* *							
		•			••		•		•	
				•				-	,	
										· ·
			•							•
			•		-	•				
	• •							•	•	
						•				
						,		•		
							•			,
•			•			*				
	* (. •		•			
					. •					
		•	·							
			•	•				· ·		
					. •		* . *			•
										•
						÷				

ONILED SLYLES ENVIRONMENTAL PROTECTION AGENCY

980 College Station Road, Athens, Georgia 30605-2700 Region 4 Science and Ecosystem Support Division

D.A.R.T. Id: 11-0591



US-EPA, Region 4, SESD Total Metals (TMTL) - Quality Control

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres

•	70-130	100	\$ <i>L</i> 9 <i>L</i> `I	200.00	4	0.8	97,202			Lead
	. 70-130	10 4	Ω	200.00		0.8	\$1.80Z			muillsdT
• *	0£1-0L	5.96	65562.0	200.00		0.8	193.25			Antimony
	061-07	8.76	U	50.000		2.5	606.84			Cadmium
	70-130	. 701	Ω	200.00		10	204.50			Selenium
	0.51-07	·L'66	0.83490	. 200.00	J∕gu	0.8	81.002			Arsenic
										8.00S A93
	11/11/80	Analyzed:	11/€0/80	Prepared:	90-6	rce: E113109	noS		(2SM-910801	Matrix Spike (1
									•	
	0£1-0 <i>L</i>	9.66	1.0380	200.00		0.8	12.002			Lead
	70-130	103	. n ·	200.00		0.8	₽ L'90Z			muilledT
	061-07	S.76	£4772.0	200.00		0.8	95.261			Antimony
	70-130	L.66	\$ 20780.0	50.000		2.5	856.64			Cadmium
	70-130	103	09195.0	200.00		10	91.902			Selenium
	. 081-07	101	1.780.1	200.00	J∕gu	0.8	₽L.202			Arsenic
										8.00S A93
	11/11/80	Analyzed:	11/£0/80	Prepared:	\$1-8	rce: E113108	nos	_	(ISM-910801	Matrix Spike (1
						•				
	511-58	102		200.00	4	0.8	204.36			Lead
1	82-112	901		200,002		0.8	212.50			muilledT
· ·	82-112	t 56		. 200.00		0.8	190.89			Antimony
•	82-112	2.79		50.000		5.5	619.84			Cadmium
	82-112	100		200,00		01	26.002			Selenium
•	511-58	L'86		200.00	7/3 n	0.8	197.32			Arsenic
	•									8.002 A93
	11/11/80	Analyzed:	11/£0/80	Prepared:					(188	FC2 (1108019-1
										•
n ·						0.1	n		٠.	Lead
n N	•.					0.1	n			muillsdT
n						1.0	'n			Antimony
n n						02.0	n			Cadmium
U.						0.2	U .			Selenium
n n					_7/ 3 u	0.1	n			Arsenic
11					D	٧.	11			EPA 200.8
	11/11/80	Analyzed:	11/80/80	Prepared:		<u> </u>			BLK1)	Blank (1108016
								als Water	19M 2.002 M - 6	Batch 1108016
PD Limit Notes	Limits R	%KEC	Result	Level	zinU	Limit	Result			- SiylsnA
vi: 1 dd	r 241 1	Jaa70	*[G	10.10		G	*1a			

KPD.

%KEC

•	

Region 4 Science and Ecosystem Support Division **CONTRED STATES ENVIRONMENTAL PROTECTION AGENCY**

980 College Station Road, Athens, Georgia 30605-2700



Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres D.A.R.T. Id: 11-0591

US-EPA, Region 4, SESD Total Metals (TMTL) - Quality Control

EPA 245.1 Mercury		U	01.0	J\gu		,					า
Blank (1108099-BL)	(IXI)			_	Prepared	& Analyze	/£7/80 :pa	· II			
Batch 1108099 - N	11W 245.1 Hg Wtr										
											n
Lead		71807.0	0.1	4	1.0000		8.07	92-132			MET-2
											<u>.</u>
muilledT		0.54100	0.1	4	00002.0		108	.581-59			MBT-5
Antimony		0.51639	0.1		00002.0		103	92-132			T-TYM
											1
Cadmium		<i>L</i> 69 <i>L</i> ₱ 0	02.0	**	0.50000		7. \$6	\$21-59	,		MKT-5
Selenium		7590.2	0.2	*	. 2.0000		103	551-59			MBT-3
Arsenic		20986.0	0.1	J∕§u	0000.I		9.86	92-132			T-TAW
EPA 200.8		207000	•	D-			, , 00	201 37			c id/t
MRL Verification (I	(12 9- 9108011)				Prepared:	11/£0/80	Analyzed	11/11/80:			
	•					,					
Lead		200.19	0.2	. "	200.00	\$ <i>L</i> 9 <i>L</i> .1	2.66	70-130	82.I	70	
muilledT		67.902	0.8	4 .	200.00	U	103	70-130	289.0	20	
, vnomijn. Vnomijn.	•	60.161	0.8	. "	200.00	95593.0	4.29	061-07	21.1	70	
Cadmium	,	48.329	5.5	.4	50.000	U	L'96	70-130	91.1	70	
Selenium		200.40	01		200.00	Ω	100	70-130	20.2	70	
Arsenic		£9.79I	0.8	√ /gu	200.00	0.83490	4.86	.70-130	82.I	70	
Matrix Spike Dup (1	(= GCYV 07 000 T T				darr		(*****			
i) aufi shing xixteM	(2GSM-9108011)	108	nrce: E11310	90-6	Prepared:	1.1/£0/80	bəzvlenA	11/11/80 :	•		
Гезд		66.661	0.8		200.00	1.0380	s:66	0£1-0Ž	601.0	. 07	
muilledT		61.702	0.8	u	200.00	Ω	104	70-130	812.0	07	
Anomita		S4.E9I	0.8		200.00	£\$LLZ'0 .	9.96	70-130	1 86 0	70	,
Cadmium		49.223	52		000.02	\$0780.0	€.86	70-130	77 Ï	02.	
Selenium	•	202.25	01	и -	200.00	0.56160	102	061-07	444.0	70	
oin∋erA		203.10	0.8	J\⁄gu	200.00	I 780. I	101	061-07	871.0	70	
8:002 A93	•										
Matrix Spike Dup (I	(108M-9108011)	IOS	nrce: El 1310	21-8	Prepared:	11/£0/80	Analyzed	11/11/80			
Batch 1108016 - N	W 200.2 Metals W	ıter									
Analyte	· · · · ·	Result	Reporting Limit	stinU	Spike	Source	%KEC	%REC Limits	RPD	RPD Limit	Notes

ES:LI 11/1/6

•	
•	
•	

980 College Station Road, Athens, Georgia 30605-2700 Region 4 Science and Ecosystem Support Division UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Reporting



Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres D.A.R.T. Id: 11-0591

US-EPA, Region 4, SESD Total Metals (TMTL) - Quality Control

•										•
(etcury)	000180.0	01.0	J/gu				551-59			NRL-2,
1.24S.AG.										
IRL Verification (1108099-PSI)				Prepared	& Analyze	1: 08/53/1				
					. /					
[etcury	0\$98.I	01.0	J∕§u	2.0000	Ω	7:00	061-07	00.0		
1.245.1 VZI	0598 1	01.0	I) Ditt	0000 6	. 11	2.56	081-0L	88.£	70	
fatrix Spike Dup (1108099-MSD2)	20010	ce: E11310	90-6	ricparcu	& Analyze	/57/90 :				
(cds) toobott)dti-3iy	3	016114	<i>70</i> 0	регошела	Service A -9	1/20/80 1				
			_				•			
(etcnty	09 4 6.1	01.0	J\gu	2.0000	0.08800	6.26	70-130	95.9	70	
FA 245.1								<u> </u>		
latrix Spike Dup (1108099-MSD1)	Sourc	ce: E11310	£1-8	Prepared	& Analyzec	1: 08/23/1	H			
	•		:	•						
etenty	0 1 67.1	01.0	7/∄ n	2,0000	Ω	L'68	70-130			
1.245.1		·.								
latrix Spike (1108099-MS2)	Sourc	ce: E11310	90-6	Prepared	& Analyze	/£Z/80 :I				_
							•			
ercury	0270.2	010	ე/∂n	0000.7	000880.0	7.66	0£1-0 <i>L</i>			
1.245.1	0020 0	010	D.S.	0000 €	0008800	C 00	021 02			
latrix Spike (1108099-MSI)	Sour	ce: E11310	CI-8	Prepared	& Analyze	/57/80 :1			<u> </u>	
	J	0,000			. , ,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	• • • • • • • • • • • • • • • • • • • •			
(mana			0							
ecenty	2.0960	01.0	J\gu	2.0000		105	\$11-58	01.1	- 07	
1.245. Aq				namdat t				<u> </u>		<u> </u>
CS Dup (1108099-BSD1)				Prepared	e Analyze	/£Z/80 ·I				
		*								
сиспи	2.0730	01.0	J/gu	2,0000		104	511-58			
P. 245.1										
CS (1108099-BSI)				Prepared	& Analyze	1: 08/23\	11			
atch 1108099 - M 245.1 Hg Wtr	_						-			
<u>_</u>	AVIDONY .			10.07	110001	077374				
nalyte	Result	Limit	estinU	Level	Result	%EEC	timit	RPD	1imi.L	Notes

 κ_{PD}

				•	
· · · · · · · · · · · · · · · · · · ·			,	•	
		•			
	,			,	
					·
	·				
			•		
•				,	
				•	
•					
•				•	
·. · · · · · · · · · · · · · · · · · ·	•				
		•			
		·			
	•				•
		: :			
		•			
		•			. ,
				:	
	•				
				•	
	•				
	•			•	
·					
	,				
	* **				
•					

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres



Notes and Definitions for QC Samples

Sample background/spike ratio higher than method evaluation criteria	I-MX
MRL verification recovery greater than upper control limits.	о́В-2
Calibration check standard greater than method control limits.	9-20
Calibration check standard less than method control limits.	ÓC-2
MRL verification for Mon-Potable Water matrix	Z-TAIM
Level in blank does not impact data quality	8-3
The analyte was not detected at or above the reporting limit.	n .
YOU SHOWING THE SMOVY	

ES:LI 11/1/6



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY Region 4 Science and Ecosystem Support Division D.A.R.T. Id: 11-0591 Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Sciffes



September 8, 2011

tZE2D-Y2B

MEMORANDUM

SUBJECT: FINAL Analytical Report

Project: 11-0591, Hattiesburg South Lagoon CSI

Compliance Monitoring

FROM: Jenny Sciffes

ASB Inorganic Chemistry Section Chief

THRU: Gary Bennett, Chief

Analytical Support Branch

TO: Richard Elliott

accordance with the Analytical Support Branch's (ASB) Laboratory Operations and Quality Assurance Manual (ASB LOQAM) found at www.epa.gov/region4/sesd/asbsop. Any unique project data quality objectives specified in writing by the data requestor have also been incorporated into the data unless otherwise noted in the Report Marrative. Chemistry data have been verified based on the ASB LOQAM specifications and may have been qualified if the applicable quality control criteria were not met. For a listing of specific data qualifiers and explanations, please refer to the Data Qualifier Definitions included in this report. The reported results are accurate within the limits of the method(s) and are representative only of the samples as received by the accurate within the limits of the method(s) and are representative only of the samples as received by the

Attached are the final results for the analytical groups listed below. These analyses were performed in

Method Used:

A170 3714

2M 2540D

EPA 365.1

EPA 353.2

2M 2210B

EPA 351.2

EPA 350.1

Analyses Included in this report:

laboratory.

Ammonia/TKN
MXT\sinommA
 Classical/Mutrient Analyses (CMA)

Demand Nitrate and/or Nitrite Phosphorous

Solids

16:34 F:34

				,
	•	,	,	
	·.			
			•	
				yr.
	· .		•	
		•		
		*		
				1
		s .		
•				
			•	
				•
	2.5			
		•		
		•		
		•	· .	
			٠,	
		1		
				. •
$\mathcal{L}_{\mathcal{L}}}}}}}}}}$				
		5.0		. "
			,	
		9	· · ·	•
			X	
		, •		*
	;			
	/			

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY Region 4 Science and Ecosystem Support Division D.A.R.T. Id: 11-0591 Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres



Sample Disposal Policy

Because of the laboratory's limited space for long term sample storage, our policy is to dispose of samples on a periodic schedule. Please note that within 60 days of this memo, the original samples and all sample extracts and/or sample digestates will be disposed of in accordance with applicable regulations. The 60-day sample disposal policy does not apply to criminal samples which are held until the laboratory is notified by the criminal investigators that case development and litigation are complete.

These samples may be held in the laboratory's custody for a longer period of time if you have a special project need. If you wish for the laboratory to hold samples beyond the 60-day period, please contact our Sample Control Coordinator, Debbie Colquitt, by e-mail at Colquitt. Debbie@epa.gov, and provide a reason for holding samples beyond 60 days



Region 4 Science and Ecosystem Support Division UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

980 College Station Road, Athens, Georgia 30605-2700
D.A.R.T. Id: 11-0591



SYMPLES INCLUDED IN THIS REPORT

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres

Project: 11-0591, Hattiesburg South Lagoon CSI

Davias	рате ие	Date Collected	YLITRIAT	במטטומנות און		andinise
10:6	I I/67/L	9E:9I II/LZ/L	Preservative Blank	E113108-01		1000-OSTH
10:6	I I/67/L	St:60 11/LZ/L	Surface Water	E113108-02		HTSO-0022
10:6	I I/67/L	St:60 11/LZ/L	Surface Water	E113108-09	•	HTSO-0024
10:6	11/67/ <i>L</i>	70:41 11/27/7	Municipal Eff. Wastewater	E113108-07		8100-OSTH
10:6	11/67/ <i>L</i>	20:41 11/27/7	Municipal Eff. Wastewater	E113108-09		HTSO-0020
10:6	11/67/ <i>L</i>	LI:#I II/LZ/L	Wastewater	E113108-10		HTSO-0043
10:6	11/67/L	18:81 11/27/2	Wastewater	E113108-11		HTSO-0044
10:6	11/67/ <i>L</i>	EI:EI II/LZ/L	Wastewater	E113108-15	•	HTSO-0045
10:6	11/67/ <i>L</i>	LI:+1 II/LZ/L	Wastewater	E113108-16	,	HTSO-0049
10:6	11/67/L	16:51 11/72/7	Wastewater	E113108-17		HTSO-0050
10:6	I I/67/L	£1:£1 11/ <i>L</i> 7/ <i>L</i>	Wastewater	E113108-18		HTSO-0051H
10:6	I I/67/L	£E:11 11/L7/L	Municipal Proc. Wastewater	E113108-16		HTSO-0033
10:6	11/67/L	11:11 11/L7/L	Municipal Proc. Wastewater	E113108-50		HTSO-0052
10:6	I I/67/L	£4:11 11/LZ/L	Municipal Proc. Wastewater	E113108-51	•	HTSO-0053
10:6	I I/67/ <i>L</i>	50:91 11/ <i>L</i> 7/ <i>L</i>	Wastewater	E113108-55		HTSO-0012
10:6	11/67/ <i>L</i>	08:60 11/L7/L	Surface Water	E113108-73		HTSO-0023
10:6	I I/67/L	06:60 11/L7/L	Surface Water	E113108-54	· .	HTSO-0025

				•
			•	
			•	
		• .		
				•
			·	
•	•			
				•
	. (4 - 4		
	• .			
		· .		
	•			
·				
				•
	•			•
		•	•	
			. •	
			·	
			•	
	·			
	•			•
	•		•	
	•			
	· ·			
		•		

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

980 College Station Road, Athens, Georgia 30605-2700 Region 4 Science and Ecosystem Support Division

D.A.R.T. Id: 11-0591



Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres

DATA QUALIFIER DEFINITIONS

to be greater than the reported value. The identification of the analyte is acceptable; the reported value may be biased low. The actual value is expected Γ to be less than the reported value. K The identification of the analyte is acceptable; the reported value may be biased high. The actual value is expected ſ The identification of the analyte is acceptable; the reported value is an estimate. D-7 Due to Matrix Interference, the sample cannot be accurately quantified. The reported result is qualitative. resulted in matrix interference. CKa Presence of a large amount of black precipitate present in sample both before and after digestion and could have resulted in matrix interference CK Presence of a large amount of black precipitate present in sample both before and after digestion and could have The analyte was analyzed in replicate. Reported value is an average value of the replicates. V \mathbf{U} The analyte was not detected at or above the reporting limit.

VCKONAWS VND VBBKEAIVLIONS

	quantitation. The MRL is sample-specific and accounts for preparation weights and volumes, dilutions, and moisture content of soil/sediments.
MKT	Minimum Reporting Limit - Analyte concentration that corresponds to the lowest demonstrated level of acceptable
WDF	Method Detection Limit - The minimum concentration of a substance (an analyte) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero.
	Note: Analytes with no known CAS identifiers have been assigned codes beginning with "E", the EPA ID as assigned by the EPA Region 4 laboratory. Region 4 laboratory.
CVO	AALL IAC COMMISCAL IMPAULANCE

estimated concentration reported. spectral library. A calibration standard has not been analyzed to confirm the compound's identification or the Tentatively Identified Compound - An analyte identified based on a match with the instrument software's mass

Page 4 of 28

JIL

OR-1

I-MO

MRL verification recovery less than lower control limits.

Matrix Spike Recovery less than method control limits

		' .	
•			
•			
		•	
			•
		•	,
·	-	•	
	•	•	•
			· · ·
		•	
			•
•	·		
	•		
	•		
			•
•			
		*	· · · · · · · ·
			•
		•	
		•	

980 College Station Road, Athens, Georgia 30605-2700 Region 4 Science and Ecosystem Support Division UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

D.A.R.T. Id: 11-0591



Classical/Nutrient Analyses

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres

Project: 11-0591, Hattiesburg South Lagoon CSI

Lab ID: <u>E113108-01</u>

Matrix: Preservative Blank

Station ID: Sample ID: HTSO-0001

EPA 365.1	11/51/8	8/12/11	0.010	J\gm	0.010 U, J, QR-1	Total Phosphorus	0-41-6277
EbV 323 T	91. 81 11/77/8	1810 11142/8	0:020	mg/L	n 050 0	N. ea. stirtit/Noterii/V	E701177 -
EPA 351.2	8/10/11	91:71	0.050	J\gm	0.050 U, J, QR-1	Total Kjeldahl Nitrogen	E17148461
EBV 3201	11/11/8	87.6 11/60/8	050.0	. Jam	10 080 O	N 25 sinomin.	L-14-499L
рецым	pəzkinniy	Prepared	NKT	siin)	Results Qualifiers	ordani.	Anmpei SVO

•	
•	
·	
•	
·	
•	•
•	
•	
*.	

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. 1d: 11-0591

OUT TO THE TOWN ON THE PARTY OF

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres

Classical/Nutrient Analyses

Project: 11-0591, Hattiesburg South Lagoon CSI

Lab ID: E113108-05
Matrix: Surface Water

Sample ID: HTSO-0022
Station ID: DNSTRM

Date Collected: 7/27/11 9:45

LZ	72818 Total Suspended Solids
	40606 BOD, S. Day
Kesnits (Snahlte	әјбриу ләди
	Z-J Sudiffe

te:91 11/8/6

	·			
1 -				
				· .
	•			
		٠	·	
	•			
				•
		·		
		÷		
		· · · · · · · · · · · · · · · · · · ·	· ·	
		•		
	•			
				:
			-	
			·	
			•	
		·		
			·	
				· .

Region 4 Science and Ecosystem Support Division UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

980 College Station Road, Athens, Georgia 30605-2700

Classical/Nutrient Analyses



Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres D.A.R.T. Id: 11-0591

Project: 11-0591, Hattiesburg South Lagoon CSI

Matrix: Surface Water Lab ID: E113108-06 Date Collected: 7/27/11 9:45

Station ID: DNSTRM Sample ID: HTSO-0024

	EPA 365.1	11/51/8	8/12/11 8/15/11	010.0	J\gm	87.0	Total Phosphorus	0-41-6277
33.33	EPA 353.2	91.81 11/77/8	91.81 11/17/8	0.050	m ® L	270	Mas olitifMolsuliM	ELOIJL
	EPA 351.2	91:71 11/01/8	91:71 11/01/8	0.050	J\gm	1.1	Total Kjeldahl Nitrogen	E17148461
D.	1 OSE Vari	11/11/8	87.6 11/60/8	050.0	7/8 m++	3E0	N se smommA	L-14-499L
	роцыу	pazijou y	bs/mqs/ ⁴	WKT	siinU	Results Qualifiers	Midnif	19quin _N
							对于大学的数据的 的数据	SVO

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY D.A.R.T. 1d: 11-0591 D.A.R.T. 1d: 11-0591

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Sciffes



Classical/Nutrient Analyses

Project: 11-0591, Hattiesburg South Lagoon CSI

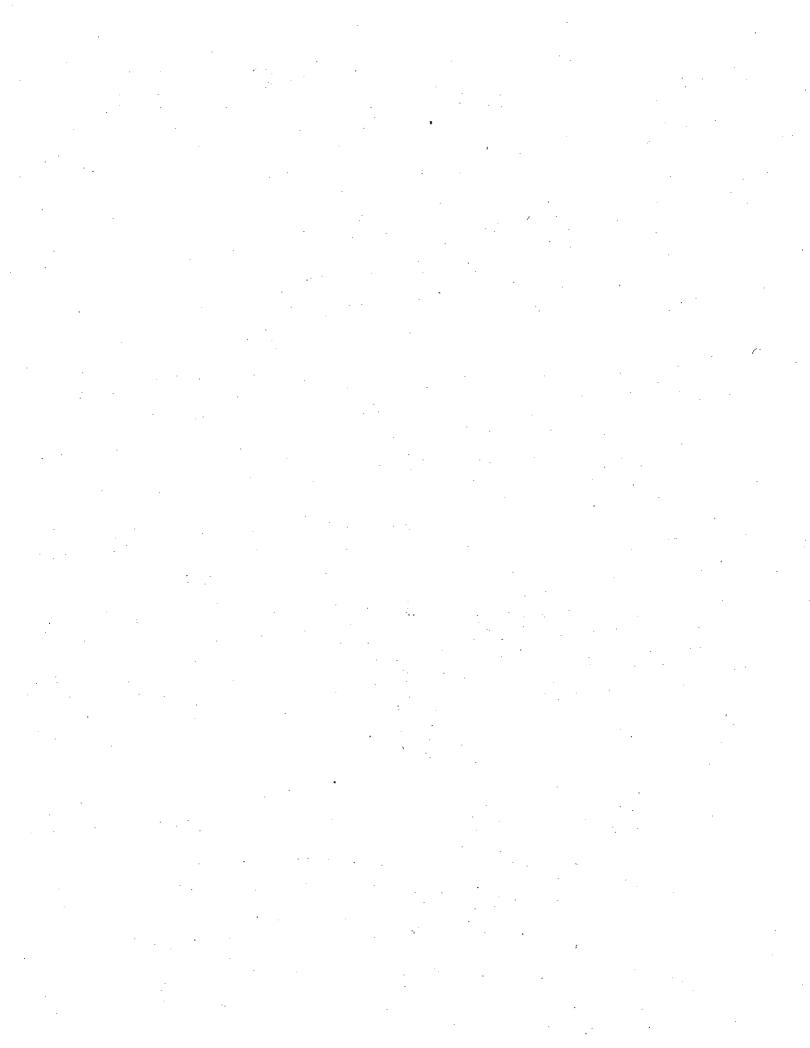
Fab ID: <u>E113108-07</u>

Matrix: Municipal Eff. Wastewater

Date Collected: 7/27/11 14:02

Sample ID: HTSO-0018
Station ID: EFF001

03/11 SM 2540D	8 01:10 8/03/11	0.4	J\gm	Lt	Total Suspended Solids	E1642818
201125 MS - \$6.22	1 SETA 11 96 11/67/L	0.2	mS(r)	V 87	BOD, S Day	9090+913
роцым рэг(п	na mda e		siiu)	Results Qualifiers	əjápuy	<i>2</i> әдшп _л



NAITED STATES ENVIRONMENTAL PROTECTION AGENCY

980 College Station Road, Athens, Georgia 30605-2700
D.A.R.T. Id: 11-0591



Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Sciffes

Classical/Nutrient Analyses

Project: 11-0591, Hattiesburg South Lagoon CSI

. Tub ID: <u>E113108-09</u>

Matrix: Municipal Eff. Wastewater

Station ID: <u>EFF001</u>

Date Collected: 7/27/11 14:02

Sample ID: HTSO-0020

	EPA 365.	11/51/8	8/12/11	0.1	J\gm	H	Total Phosphorus	7723-14-0
7	ESV 323	1816	18.16	0900	7/3/m	0900	NacolitiNessiM	<i>11</i> 110 <i>1</i> 3
7	EPA 351.	91:71 11/01/8	91:71 11/01/8	0.1	J\gm	36	Total Kjeldahl Nitrogen	E17148461
41	EPA 350	11/11/8	87.60/8 87.60/8	05.0	J/jim	F 3 4 61 2 5	N 28 sinomA	L-11-199L
illin English	роціэн ј	pozymuy	Prepared	WKL	etinU	Results Qualifiers	ayinuy ayinuy	LaquinN CVS

· · · · · · · · · · · · · · · · · · ·
·

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0591

AGENCY OF THE CONTRACT OF THE

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Sciffes

Classical/Nutrient Analyses

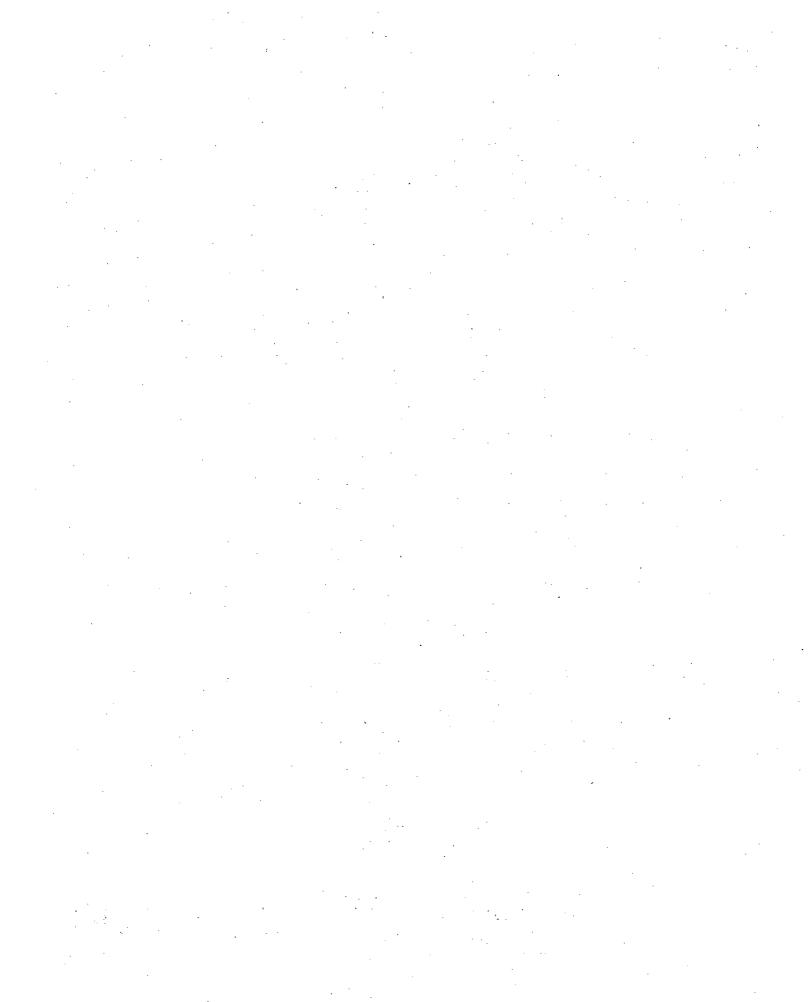
Project: 11-0591, Hattiesburg South Lagoon CSI

Lab ID: E113108-10
Matrix: Wastewater

Station ID: INFL

Sample ID: HTSO-0043

rs spilo2 be	E1642818 Total Suspende
18	EJ940909 BOD' 2 DSA
y cantis	ynupe yundie:
	Nesults Nesults



Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Sciffes D.A.R.T. Id: 11-0591 980 College Station Road, Athens, Georgia 30605-2700 Region 4 Science and Ecosystem Support Division NNILED STATES ENVIRONMENTAL PROTECTION AGENCY



Classical/Nutrient Analyses

Project: 11-0591, Hattiesburg South Lagoon CSI

Lab ID: <u>E113108-11</u>

Matrix: Wastewater

Station ID: INFL Sample ID: HTSO-0044

SM 2540D	8/03/11	01:17 11/E0/8	0.4	J\gm	0†9	Total Suspended Solids	E1642818
2M 2510H	8511 11/67/L	1/29/11 82:11	5.0	e Palasar	1 079	BOD; 5 Day	E1640606
роцыц	pazijouy	bsneqstA	WKT.	siinU	Results Qualifiers	อนุขน _ุ ง	Number



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id. 11-0591

TOTAL TOTAL

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres

Classical/Nutrient Analyses

Project: 11-0591, Hattiesburg South Lagoon CSI

Lab ID: <u>F113108-12</u> Matrix: Wastewater Station ID: <u>[UFL</u>

Sample ID: HTSO-0045

SM 2540D	01:17	01:17 11/£0/8	0.4	J\gm	067	Total Suspended Solids	E1642818
SM SZ10B	85:11 11/67/L	11/6Z/L	0.7	7/8w)	0)×E	BOD, SDay	9090+913
роцых	pazijouy	Prepared	WKT	siinU ;	Results Qualifiers	Sindibut	Anmper CVS

	,				
	•	•		i	
1 · · · · · · · · · · · · · · · · · · ·	,	• .			
•				. • • •	
	entral de la companya del companya del companya de la companya de		•		
					•
		:			·
•					•
`				1	
			•		•
		:		•	
·					
					•
•					•
	.•			:	
			•	•	
	•			•	•
`		•			
		· .		•	
	,				
					•
		•			
•					
	•		•	•	•
•					
		10 mg	•	•	
		·			
•			e e		•
4					
•					
	4 · 4		· .		
				•	
					• *
		;			·. · ·
			•	•	
				. •	
				•	
		•			
	•				,
•					
•		•			
	•	•			
			•		

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY 880 College Station Road, Athens, Georgia 30605-2700

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres



Classical/Nutrient Analyses

Project: 11-0591, Hattiesburg South Lagoon CSI

Lab ID: E113108-16

Matrix: Wastewater

Station ID: INFL

Sample ID: HTSO-0049

EPA 365.1	11/51/8	8/15/11	0.1	J\gm	1.9 J, QR-1		Total Phosphorus	0-41-6277
EPA353.2	18.16 11/62/8	91.81 11/67/8	0.050	7/ 3 w	0 050°0	V	zs sirtiNstatiN	EXOIIA
EPA 351.2	91:71 11/01/8	91:71 8/10/11	0.1	J/gm	. 61	подеп	Total Kjeldahl Ni	E17148461
Eb¥ 320 £	11/11/8 54.41	1 1/60/8	05.0	7/8u	L'S	A A	V as sinommA	L-11-199L
роцюм	pazijouy	Prepared	MKT	siin	Results Qualifiers		and and and	taquin _N

				•	:
	• •				
·	,		•		•
				•	
		,			
•					
					·
		**			
	• .				
				. , (
					•
				.\	
			•	·	
•					•
					,
	•				e i
				•	
		•		ř	
•					
			•		
			•		
•					
1	en en en en en en en en en en en en en e				**
	•			•	
•					
			*.	•	
					•
					• •
			•		
· .					
		. .	•		•
					,
		•			
				•	
	•	:		•	
·				•	
			•		
					•
					٠.
· .					
	. •				
	•				
		•		•	
					,
•					•

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY Region 4 Science and Ecosystem Support Division

Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 11-0591 Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres



Classical/Nutrient Analyses

Project: 11-0591, Hattiesburg South Lagoon CSI

Lab ID: E113108-17
Matrix: Wastewater

Station ID: <u>HTSO-0050</u> Station ID: <u>INFL</u>

	EPA 365.1	11/51/8	\$4.8 11/21/8	0.1	J\gm	11 1, D-2	Total Phosphorus	7723-14-0
7 D	FBA 3532	91.81	11/17/8	050) . ஆன் .	SEO	Wicale/Nitrite as W	E701177
	EPA 351.2	91:71 11/01/8	91:71 11/01/8	0.2	J\gm	170 CRa, D-2	Total Kjeldahl Nitrogen	E1/1148491
	LOSE ASH	11/11/8	87-6 11/60/8	-05.0	7/8w	88	N.zs. sinominA	L-11-1199L
	роцюју	pəziyony	paredard	NKT	siinU	Results Qualifiers	a don A	Anuper CVS

*				·
	•			
. •			T. Control of the con	
		· · · · · · · · · · · · · · · · · · ·		•
				•
				•
				·

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres

Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0591

AGENCY. GALING.

Station ID: INFL

Sample ID: HTSO-0051

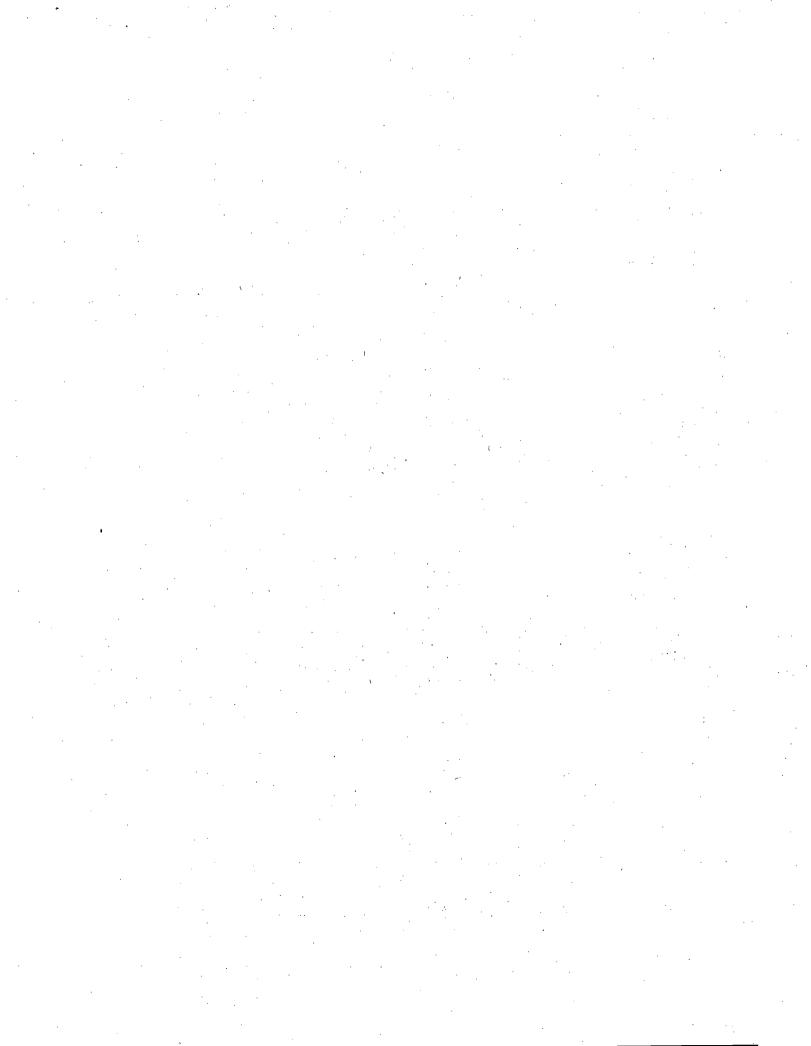
Classical/Nutrient Analyses

Project: 11-0591, Hattiesburg South Lagoon CSI

Lab ID: <u>E113108-18</u>

Matrix: Wastewater

	EPA 365.	\$1:\$1/8	8/12/11	0.1	J\gm	9.8	sınonqason'd latoT 0-41-82777
17	ESE VAH	91.81 11/ 1 778	91 81 11757/8	050.0) To a second	0.000 U	Mass adrafi Materi IV 77,1107,5
7	EPA 351.	91:71 11/01/8	91:71 11/01/8	1.0	. Л\gm	68	E17148461 Total Kjeldahl Nitrogen
i	ELV 320	(F) 51 11/11/8	\$7.6 11/60/8	05.0	Agm	67 mag 1 dans	N 28 BINOMMA 12 V-14-F-200
	роцюју ј	p#2.Gouy	Prepared	WKT	sjiuj	Results Qualifiers	Anmpet Jaguny Jaguny SVO



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres



Classical/Nutrient Analyses

Project: 11-0591, Hattiesburg South Lagoon CSI

Lab ID: E113108-19

Matrix: Municipal Proc. Wastewater

Station ID: INTERNAL PROCESS SAMPLE Sample ID: HTSO-0033

0 SM 2540D	1:17 01 /E0/8 11,	\£0\8 0	.p J\gm	390	Total Suspended Solids	E1642818
1 SM 2510B)	56 67/L II	5.6° 162/L 0	war.	V 001	BOD' 2 Day	E1640606
poytow por	Nouv par	ndəri -	AM SinU	Results Qualifiers	Andyre	



Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres D.A.R.T. Id: 11-0591 980 College Station Road, Athens, Georgia 30605-2700 Region 4 Science and Ecosystem Support Division **UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

Classical/Nutrient Analyses

Project: 11-0591, Hattiesburg South Lagoon CSI

- Lab ID: <u>E113108-20</u>

Matrix: Municipal Proc. Wastewater

Station ID: INTERNAL PROCESS SAMPLE Sample ID: HTSO-0052

SM 2540D	01:12 11/60/8	01:17 11/60/8	0.4	J\gm	061	Total Suspended Solids	E1642818
SMI SZ10B	71/62/L	71/67/L	0.2	-1\gm	V-66	BOD, 5 Day	EI@#000
novaki.	คล?ภักษณ	namdari	7.4	1941. a. (42)			

•
•
•
•
,
•
~
•

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres



Classical/Nutrient Analyses

Project: 11-0591, Hattiesburg South Lagoon CSI

Tab ID: E113108-21

Matrix: Municipal Proc. Wastewater

stin []

MRL Prepared Analyzed Method

Station ID: <u>INTERNAL PROCESS SAMPLE</u>
Sample ID: <u>HTSO-0053</u>

Date Collected: 7/27/11 11:43

	_ ~					<u></u>	
SM 2540D	01:17	8/03/11	0.4	J/gm	. 001	 Total Suspended Solids	E1642818
SM 5210B	90:01 11/67/L	90:01 L1/6Z/L	0.2	J/gm	¥ 79	BOD' 2 Day	E1640606
OF THE PROPERTY OF THE PROPERT	Proposition of the second	CORPO DO STATE DE LA CORPO DEL CORPO DE LA CORPO DEL CORPO DE LA CORPO DEL CORPO DE LA CORPO DE LA CORPO DE LA CORPO DE LA CORPO DEL CORPO DE LA CORPO DEL CORPO DE LA CORPO DE LA CORPO DE LA CORPO DE LA CORPO DE LA CORPO DE LA CORPO DE LA CORPO DE LA CORPO DE LA CORPO DE LA CORPO DE LA CORPO DE LA CORPO DEL CORPO DE LA CORPO DE LA CORPO DE LA CORPO DEL CORPO DEL CORPO DEL CORPO DEL CORPO DEL CORPO DEL CORPO DEL CORPO DEL CORPO DEL CORPO DEL CORPO DEL CORPO DEL CORPO DEL CORPO DEL CORPO DEL COR		MARKANIA BARKAN MATALI PRACISIONA (MARKANIA MARKANIA MARK			

Results Qualifiers

te:91 11/8/6

•				
			·.	
	•			
		•		
			•	
. e. i.,		•		
	•	•		
				,
	r			
		:		
	·			
		·		
		1	* .	
·				
				-
•				•
				•
•				
•			• • •	
	* ** ;		•	
•				•
•				
		•		
		1		
		•		
. (+ 2		•	
	¢			
			•	٠.
	•			
			••	
•	· · · · · · · · · · · · · · · · · · ·	•		

Region 4 Science and Ecosystem Support Division UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Kegion 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. 1d: 11-0591

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres



Classical/Nutrient Analyses

Project: 11-0591, Hattiesburg South Lagoon CSI

Lab ID: <u>E113108-22</u>

Matrix: Wastewater

Station ID: PRETRT

Sample ID: HTSO-0012

Date Collected: 7/27/11 16:05

SM 2540D	01:12	11/50/8	4.0	J\gm	0†9	Total Suspended Solids	E1642818
EBV 302 1	11/51/8	S# 8 11/7/1/8	0.1	J\gm	r zatu	Total Phosphorus	-0-1/1-EZ <i>LL</i>
EPA 353.2	91:81 8/54/11	8/24/11	0.050	J\gm	9.1	Vitrate/Vitrite as V	E701177
SM S210B	11/55/11	07.61 11.67/L	0.2	7/8w	100E	BOD' 2 Day	E1940909
EPA 351.2	91:71 11/01/8	91:71 11/01/8	0.2	J\gm	720 CK' D-7	Total Kjeldahl Mitrogen	E11148491
EFA 350.1	IIVITAS	87.6 11/60/8	0.1	7/8w	76	N se sinommA	L-11-199L
усцюя	pəz (puy	Prepared	MKT	siin]]	Kesults Qualifiers	Analyte	Number SAS

E113108 CNY LINYL

Page 19 of 28

		•
	•	(
•		•
,		
· .		
		•
·		
		$\mathcal{N}_{\mathcal{A}}$
•		
•		

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0591

AGENCY STATES OF THE STATES OF

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres

Classical/Nutrient Analyses

Project: 11-0591, Hattiesburg South Lagoon CSI

Lab ID: E113108-23 Mater Matrix: Surface Water

Station ID: UPSTRM

Sample ID: HTSO-0023

Date Collected: 7/27/11 9:30

SM 2540D	01:17	01:12 8/03/11	0 t	J\gm	97	Total Suspended Solids	E1642818
SM 5210B	65:8 11/67/£	65.8 11/67/L	0.2	J/gm;	₩ 0 K	BOD, 5 Day	E1640606
Method	pozijouy	Prepared	WKL	siinU	esults Qualifiers	yuqhic K	12quin)
西州			#		TAILS TO SELECT		SVO

b:3t II/8/6



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 11-0591 Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres



Classical/Nutrient Analyses

Project: 11-0591, Hattiesburg South Lagoon CSI

Lab ID: <u>E113108-24</u>
Matrix: Surface Water

Station ID: <u>UPSTRM</u>
Station ID: <u>UPSTRM</u>

Date Collected: 7/27/11 9:30

EPA 365.1	11/51/8	8/17/11	010.0	J/gm	91.0		Total Phosphorus	0-11-6277
SEZENIA	91.81	91.81 11/#7/8	0.050	.J/gm	## PY'0	7745	N as stration saturity	E/011//
EPA 351.2	91:71 11/01/8	91:71 11/01/8	050.0	J\gm	1-MQ ,t ea.0		Total Kjeldahl Nitrogen	E11148491
EPA 350 1	11/11/8	87.60/8 87.60/11	050.0	J/Bui	110		∑ N es sinommA	L-1 1-19 94
усцюц	раглующу	рэлөдэгд	WKT	sinU	Results Qualifiers		ði.Gnuy	Aniupsi CV2

	· · · · · · · · · · · · · · · · · · ·
^	
	•
	•
	•
	•
	·
	• •
	·

Region 4 Science and Ecosystem Support Division UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

980 College Station Road, Athens, Georgia 30605-2700
D.A.R.T. Id: 11-0591



Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres

Classical/Nutrient Analyses (CNA) - Quality Control US-EPA, Region 4, SESD

	. 01	1.27	££1-6 <i>L</i>	102		00.291	m\$\L	0.2	08.891	BOD' 2 D ^{g)}
			- 11	/67/L0:	bəzylenA 3	Prepared 8			ţ	TCS Dup (1108028-BSD1)
			££1-6 <i>L</i>	101		00.291	J\gm	0.2	00'961	BOD' 2 Day
			11	/67/20 :	bəzylenA 2	Prepared 8		·.		TCS (1108078-BS1)
n							J\gm	0.2	n .	BOD' 2 D ^g \
			11	/67/L0:	bəz <u>ylanA</u> 3	Prepared 8				Blank (1108028-BLK1)
										Batch 1108028 - C SM5210 BOD
עאנד-2, ח			621-69	€.89		4.8300	J\gm	0.4	000€.€	SM 2540D Total Suspended Solids
			II	/£0/80 :	bəzylsnA 3	Prepared 8				MRL Verification (1108014-PS1)
	01 .	\$86.0	. •		009 09		J\gm	0°¢	007.19	SM 2540D Total Suspended Solids
			. [1	/£0/80 :	bəzylenA 3	Prepared 8	£1-6	e: E11310	Source	Duplicate (1108014-DUP2)
	10	59.2			26.100		mg/L	0.4	. 008.92	ZW S240D Lotsj Suspended Solids
· _			- 11	/£0/80 :	bəzylanA 3	Prepared 8	8-23	e: E113108	Source	Duplicate (1108014-DUP1)
	01	1.22	83-109	101		009 [.] 96		0.4	009.76	SM 2540D Total Suspended Solids .
			H	/£0/80 :	bəzylenA 3	Prepared 8				TCS Dnb (1108014-BSD1)
			83-106	701		009.96	J/8.m	0.4	008.86	SM 2540D Total Suspended Solids
			II	/£0/80 :	bəzylsnA 3	Prepared 8				CCS (1108014-BSI)
n							J\gm	0.4	U	SM 2540D Total Suspended Solids
				/£0/80 :1	bəzylsnA 3	Prepared 8				Blank (1108014-BLK1)
· .										Batch 1108014 - C 2540 Solids
Notes	RPD Limit	RPD	%REC Limits	%KEC	Source	Spike	stinU	Reporting Jimid	Kesnlt	Analyte

·	
•	
	•

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY 980 College Station Road, Athens, Georgia 30605-2700

Project: 1

D.A.R.T. Id: 11-0591 Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Sciffes

Classical/Nutrient Analyses (CNA) - Quality Control US-EPA, Region 4, SESD

0									•		
U NRL-2,			70-130	0.17		0.050000	J/gm	0.050	0.03550	·	N 25 sinommA
		_			t						FPA 350.1
			11/11/80	Analyzed:	11/60/80	Prepared:				1108043-PSI)	MRL Verification (
					7						
	10	2.49	011-06	6.86	0.080700	1.0000	J\gm	0.050	1.0393		V as sinommA
										.)	FPA 350.1
			11/11/80	Analyzed:	11/60/80	Prepared:	71-6	ce: E113103	Sourc	1108043-MSD2)	Matrix Spike Dup (
							- a				
	10	044.0	011-06	4.59	09601.0	1.0000	J\gm	0.050	1.640.1		V as sinommA
			11/11/00	DOZ (INID.	11/60/00	:nomdat t		OLCITO 122	Inoc	(v doty) choosty	EPA 350.1
			11/11/80	.hazvien A	11/60/80	Prepared:	76-8	ce: E113108	21108	(IUSM-EA08011)	Matrix Spike Dup (
	^ .										
			011-06	2.59	0.080700	1.0000	J\ <u></u> Ձm	0.050	L\$10.1		M as sinommA
			·								EPA 350.1
			11/11/80	Analyzed:	11/60/80	Prepared:	71-6	ce: E113103	Sour	043-MS2)	Matrix Spike (1108
			011-06	6.26	09601.0	1.0000	J\gm	050.0	1.0390		V as sinommA
•											FPA 350.1
		_	11/11/80	Analyzed	11/60/80	Prepared:	77-8	ce: E113108	Sourc	(ISM-E#0	Matrix Spike (1108
		٠.									
	10	8£4.0	011-06	ź.16		0000.I	J\gm	050.0	0.91220		V za sinommA
	O1	867 0	011 00	C 10	i	00001	_I /Ju	030 0	000100		1.03£ A93
			11/11/80	Analyzed	11/60/80	Prepared:				(IUSA-	CCS Dnp (1108043
							~ 4				
			011-06	9.16		0000.I	J/gm	0.050	0.916.0	,	F.035 Aq3 W 25 sinommA
			11/11/90	Dazyish	11/60/90	Prepared:					EBV 380 1 FC2 (1108043-B21
			11/11/90	Formier V	11/00/80	Decorpora			·	`	134 27060117 357 1
										,	
U							J\gm	0.050	n	,	V as sinommA
			11/11/00:	nor Cinin I	T. 1. (0. (0.0)	ino mdo i r			·		FPA 350.1
	<u>-</u>		[[/[[/80	hazvienA	11/60/80	Prenared.				· (IX)	Blank (1108043-BL
										sinommA 1.025	Batch 1108043 - 6
	. 02	28.2		: ·	336.00		J\gm	0.2	317.00		BOD' 2 Day
							_	7 -		/	SM 5210B
			- 1	1/67/L0 :P	szγlsπA 3	Prepared	21-8	ce: E113108	Sour	-DUP1)	Duplicate (1108028
										SWS210 BOD	Batch 1108028 - 0
Notes	Limit	KPD	Limits	%KEC	Keanlt	Level	stinU	Limit	Result	· · · · · · · · · · · · · · · · · · ·	Analyte
	RPD		%EEC		Somce	Spike		Reporting	•		

	·
·	

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY Region 4 Science and Ecosystem Support Division

Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0591



Classical/Nutrient Analyses (CNA) - Quality Control US-EPA, Region 4, SESD

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres

			~ A				257.24			о́в-1, ∪
PA 351.2 otal Kjeldahl Mitrogen	0.029300	0.050	J\gm	0.050000		9.85	061-07			WKT-5
JRL Verification (1108052-PS1)				Prepared	& Analyzed	/01/80	II			
PA 351.2 otal Kjeldahl Vitrogen	7876 I	0.050	J\gm	0000.1	09/27.0	611	011-06	∠0 €	50	с-wठ
fatrix Spike Dup (1108052-MSD2)	nos	rce: E11310	9-12RE1	Prepared	δε Analyzed	/01/80 :	11			
PA 351.2 otal Kjeldahl Mitrogen	1.6120	050.0	J\gm	1.0000	07769.0	8.19	011-06	LI.T	07	
Astrix Spike Dup (1108052-MSD1)	nos	rce: E11310	8-74KEI	Prepared	& Analyzed	/01/80 :	. 11			
P A 351.2 otal Kjeldahl Mitrogen	£\$86.1	0.050	J\gm	0000.1	09727.0	153	011-06			z-MQ
Tatrix Spike (1108052-MS2)	nos	rce: E11310	9-12RE1	Prepared	& Analyzed	/01/80 :	Π			
PA 351.2 otal Kjeldahl Mitrogen	S848.I	050.0	J\gm ⋅	0000.1	0++69.0	<i>t</i> .28	011-06			ом-1
Tatrix Spike (1108052-MS1)	nos	rce: E11310	8-24RE1	Prepared	oszγlsπA 38	/01/80	. [1		,	
PA 351.2 otal Kjeldahl Mitrogen	2.3686	0.050	 Д\ з ш	2.3400		101	011-06	702.0 ·	SI.	
CS Dup (1108052-BSD1)	,			Prepared	oəzylenA 🥸	/01/80:	11			
PA 351.2 otal Kjeldahl Mitrogen	23735	0.050	J\gm	2.3400		101	011-06			
CS (1108052-BS1)			,	Prepared	& Analyzed	/01/80				
PA 351.2 oral Kjeldahl Mitrogen	n	0.050	J\gm					٠.		n
Juk (1108027-BTK1)				Prepared	& Analyzed	/01/80 :1	I I			
atch 1108052 - C 351.2 TKN							_			
IRL Verification (1108043-PS1)				Prepared:	11/60/80	ynalyzed	11/11/80 :			
atch 1108043 - C 350.1 Ammonia				-		-				
лајус	Result	Reporting Limit	stinU	Spike	Source	%KEC	%REC	KPD	RPD Limit	Notes

					,
		·			
				•	
					•
			•		
		•	•	~	
				,	
		•			
		• • • • •			
7					
		,			
	•				
					•
					•
				<i>:</i>	
			,		
		•	* *		
		•		, ,	
		•	•		
			,		
	•				•
	·	,			
		.'		•	•
		•		•	
	•				
			1	· .	
		• • •	•		
		· · · · · · · · · · · · · · · · · · ·	• .		
				•	
		•			
			" \	•	•
			•		
					•
•				•	
				the second	
, •			•		
	•				

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY 980 College Station Road, Athens, Georgia 30605-2700

960 College Station Road, Ameris, Oeorgia 30005-2700 D.A.R.T. 1d: 11-0591 Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Sciffes



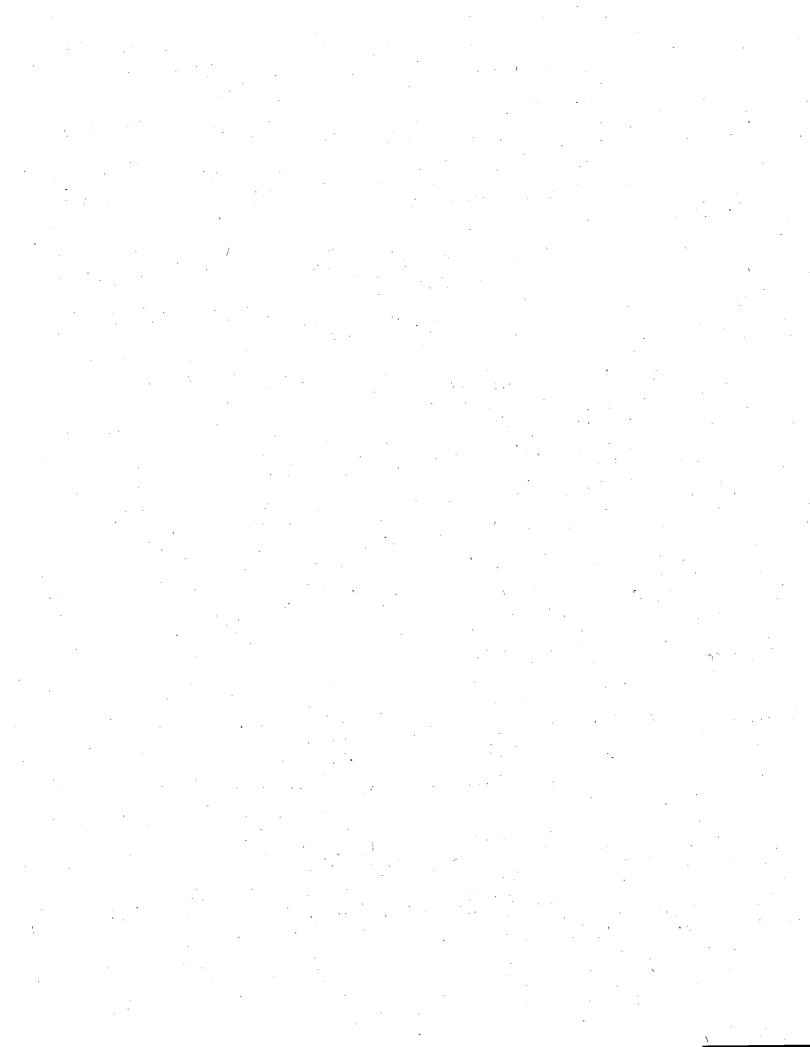
Classical/Nutrient Analyses (CNA) - Quality Control US-EPA, Region 4, SESD

Source

KPD

Reporting

Matrix Spike (1108061-MS4)		nos	.ce: E11310	71-6	Prepared:	11/71/80	Analyzed:	11/\$1/80			
FPA 365.1 Total Phosphorus		0\$0\$9.0	010.0	7/8ш.	00008.0	01881.0	1.66	011-06			
Matrix Spike (1108061-MS3)		nos	.ce: E11310	\$7-8	Prepared:	11/21/80	Analyzed	11/51/80			
FAS 365.1 Fotal Phosphorus		05595.0	010.0	J\gm	0.50000	005550.0	201	011-06			
Matrix Spike (1108061-MS2)		noS	.ce: E1137(L0-7	Prepared:	11/71/80	Analyzed	11/\$1/80	_		
FAS 365.1 Total Phosphorus		0069\$.0	010.0	շ	00005.0	007150.0	101	011-06			
(12M-1808011) ships (1108061-MS1)		nos	.ce: E11310	3-38RE1	Prepared:	11/21/80	Analyzed	11/51/80			
F AA 365.1 Total Phosphorus		04704.0	010.0	. J\gm	0.40750		100	011-06	67.0	01	
CCS Dup (1108061-BSD2)					Prepared:	11/71/80	Analyzed	11/\$1/80		_	
EPA 365:1 Fotal Phosphorus		0.39830	010.0	J\gm	0.40750		L'. L6	90-110	31.6	. 01	
CCS Dup (1108061-BSD1)	<u> </u>	-		<u> </u>	Prepared:	11/71/80	Analyzed	11/51/80			
r.235 Aq3 suroriqeodq isto	,	0980† 0	010.0		0.40750		100	011-06		,	
CCS (1108061-BS2)					Prepared:	11/71/80	Analyzed	11/\$1/80			
PA 365.1 Forst Phosphorus		011116.0	010.0	J\gm	0.40750		101	011-06			
CCS (1108001-BSI)					Prepared:	11/71/80	Analyzed	11/51/80			
F.A.366.1 Fotal Phosphorus		n .	0.010	Л⁄Зш ́				•			ı .
Blank (1108061-BLK2)					Prepared:	11/21/80	Analyzed	11/\$1/80:		٠.	
7.835 Aq 3 101al Phosphorus		n	0.010	Л\зт	· .				. •		ı
Blank (1108061-BLK1)					Prepared:	11/71/80	Analyzed	11/51/80 :			
Ватећ 1108061 - С 365.1 ТР	soy								C	7	
Analyte		Result	Limit	Units	Level	Result	%KEC	Limits	RPD	Limit	Notes



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. 1d: 11-0591

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres

Classical/Nutrient Analyses (CNA) - Quality Control US-EPA, Region 4, SESD

S. 28.2 Aq 363.2 Vitrate/Witrite as W		0.49020	050.0	Л∕вт	0.50000		0.86	011-06	3.40	01 .	
CCS Dup (1108133-BSD1)	·	<u> </u>			Prepared	& Analyze	7/ 1/7 7/80 :pa	I			
S.53E A93 V es 91'11'10'es 17		08£74.0	0\$0.0	Л\gm	00005.0		8.49	011-06			
CS (1108133-BS1)					Prepared	& Analyze	I/₽Z/80 :p3	I			
S.E. A.9 Vitrate/Nitrite as N	,	n .	0.000	J\gm			<i>;</i> .				n
Blank (1108133-BLK1)					Prepared	szylsnA &	I/\$Z/80 :p3	I			
1-60N 2.828 D - 8818011 A3188	. . ;		<u> </u>			Ĺ					
								•		,	
↑.33£ Aq∃ sınolqsod¶ listo`l).0	0009\$00.0	010.0	J\gm	0.010000		0.88	051-07			MRL-2,
MRL Verification (1108061-PS1)	-	-			Prepared:	11/71/80	Analyzed	11/51/80 :			
r.38E Aq= sunonqeoonq lestol		0\$\$89.0	0100	7/8 ш	0.50000	0.20450	7.96	011-06	642.0	01	
Matrix Spike Dup (1108061-MSD4	_	noS	rce: E11310	71-6	Prepared:	11/71/80	Analyzed	11/51/80 :			
r.23£ Aq 3 sunonqeod¶ listo?		0.8448.0	010.0	J\gm	00008.0	01881.0	L'86	011-06	\$04.0	01	. ·.
Matrix Spike Dup (1108061-MSD3	•	noS	ree: E11310	77-8	Prepared:	11/71/80	Analyzed	11/\$1/80			
r.23£ Aq 3 smonqeon¶ leso		05995.0	010.0	['] J\gm	00005.0	0.05250	701	011-06	829.0	01	
Matrix Spike Dup (1108061-MSD)	•	noS	rce: E11320	L0-7	Prepared:	11/71/80	Analyzed	11/\$1/80			
r. 235 Aq 3 otal Phosphorus		06\$78.0	010.0	J\gm	0.50000	007180.0	103	011-06	25.1	01	
Natrix Spike Dup (1108061-MSDI		TuoS	rce: E11310	3-38RE1	Prepared:	11/71/80	Analyzed	11/\$1/80:			
r.38E Aqg oral Phosphorus		04989.0	0100	J\gm	0.0000	0.20450	t 96	90-110			
Matrix Spike (1108061-MS4)		noS	rce: E11310	71-6	Prepared:	11/71/80	Analyzed	11/\$1/80:	*.		
Satch 1108061 - C 365.1 TPhos											
Analyte		Result	Reporting Limit	stinU	Spike	Source Result	%KEC	%REC Limits	RPD	RPD Limit	Notes

•
·
•

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Sciffes Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Sciffes



Witrate/Witrite as N

Classical/Nutrient Analyses (CNA) - Quality Control US-EPA, Region 4, SESD

EPA 353.2										
MRL Verification (1108133-PS1)				Prepared	əzγisnA ॐ	/ / 7/80 :p	H			
Nitrate/Nitrite as N	0.94930	0\$0.0	Л\gm	00005.0	0,44340	101	011-06	2.10	01 ·	
Matrix Spike Dup (1108133-MSD1)	nos	rce: E11310	\$7-8	Prepared .	& Analyze	/t/Z/80 :P	II		· .	
EPA 353.2 Vitrate/Vitrite as V	08886.0	0.050	mg/L	0.50000	04644.0 -	1 66	011-06			
Matrix Spike (1108133-MS1)	nos	rce: E11310	\$-2 ₄	Prepared	& Analyze	/ / 7/80 :p	11			
Batch 1108133 - C 353,2 NO3-NO2										
Алајуте	Result	Reporting limit	stinU	Spike Level	Source	%KEC	%REC Limits	RPD	RPD Limit	Notes

ղ/ฐա

0.050

0.048800

0.050000

MKT-7

10-130

9.76

	· •		, ,		
			•		
				•	•
		· ·			
	. •			•	
•	•				4.
•		100 mg/mg/mg/mg/mg/mg/mg/mg/mg/mg/mg/mg/mg/m		,	
		•			
			•		
· ·	•			•	
		•			
			• *		
	•		,		
				•	
				•	
·	•				•
	•				· · · · · · · · · · · · · · · · · · ·
•					
•		•			
•					
	•				
	-	•			
•			•		
					•
	•				
4			•		
•					
				•	
		•	•		
•	• •		<u>.</u>		•
		•		• '	
•					
		•	•	•	
•				·	
	•	·			
	•				
	·	•		•	
			•		
			•	,	
			•		
		•	•		
				•	
•	•				
		4	•		
		. "			
	•		$\mathcal{L}_{\mathcal{L}}}}}}}}}}$		
				•	
		. •			•
·					

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY B.A.R.T. Id. 11-0591 D.A.R.T. Id. 11-0591 Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres



Notes and Definitions for QC Samples

Matrix Spike Recovery greater than method control limi	ом-2
Matrix Spike Recovery less than method control limits	ı-M9
MRL verification for Non-Potable Water matrix	MBT-7
The analyte was not detected at or above the reporting li	U

MRL verification recovery less than lower control limits.

te:91 11/8/6

٠.		
•		
	- -	
	•	
	\	
pro-		

Region 4 Science and Ecosystem Support Division UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

980 College Station Road, Athens, Georgia 30605-2700

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres D.A.R.T. Id: 11-0591

September 30, 2011

WEMORANDUM

20B1ECL:

tZE2D-YZB

Project: 11-0591, Hattiesburg South Lagoon CSI

Compliance Monitoring

FINAL Analytical Report

Jenny Scifres FROM:

ASB Inorganic Chemistry Section Chief

Gary Bennett, Chief

Richard Elliott

Analytical Support Branch

:OT

THRU:

corrected results for those results previously reported. Please refer to the Report Narrative for more details. This data report is being reissued. Some or all of these results were previously reported. Please substitute the

accurate within the limits of the method(s) and are representative only of the samples as received by the explanations, please refer to the Data Qualifier Definitions included in this report. The reported results are been qualified if the applicable quality control criteria were not met. For a listing of specific data qualifiers and Report Narrative. Chemistry data have been verified based on the ASB LOQAM specifications and may have specified in writing by the data requestor have also been incorporated into the data unless otherwise noted in the (ASB LOQAM) found at www.epa.gov/region4/sesd/asbsop. Any unique project data quality objectives accordance with the Analytical Support Branch's (ASB) Laboratory Operations and Quality Assurance Manual Attached are the final results for the analytical groups listed below. These analyses were performed in

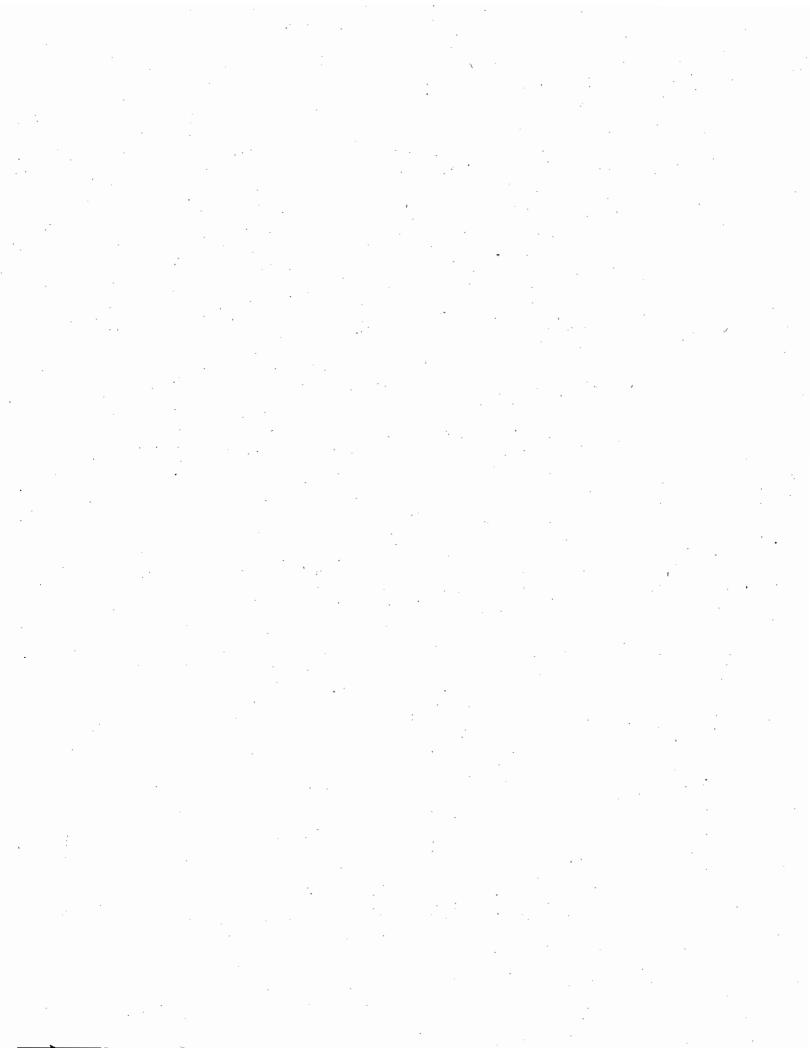
laboratory.

Method Used:

Analyses Included in this report:

ZW 5240D	
EPA 365.1	
EPA 353.2	
SM 5210B	
EPA 351.2	
LPA 330.1	

Solids Phosphorous Nitrate and/or Nitrite Demand MXT\sinommA MXT\sinommA, Classical/Mutrient Analyses (CMA)



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY Region 4 Science and Ecosystem Support Division D.A.R.T. 1d. 11-0591 Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Sciftes



Report Narrative for Work Order E113108, Project: 11-0591 (one each for samples 17 and 22), but they were the same wording. The difference was a space at the beginning of the comment and a period at the end, which is now corrected. The wording of the remark was not changed nor were the results.

Sample Disposal Policy

Because of the laboratory's limited space for long term sample storage, our policy is to dispose of samples on a periodic schedule. Please note that within 60 days of this memo, the original samples and all sample extracts and/or sample digestates will be disposed of in accordance with applicable regulations. The 60-day sample disposal policy does not apply to criminal samples which are held until the laboratory is notified by the criminal investigators that case development and litigation are complete.

These samples may be held in the laboratory's custody for a longer period of time if you have a special project need. If you wish for the laboratory to hold samples beyond the 60-day period, please contact our Sample Control Coordinator, Debbie Colquitt, by e-mail at Colquitt. Debbie @epa.gov, and provide a reason for holding samples beyond 60 days

Page 2 of 28 E113108 CNA FINAL



Region 4 Science and Ecosystem Support Division UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0591



SYMPLES INCLUDED IN THIS REPORT

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres

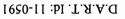
Project: 11-0591, Hattiesburg South Lagoon CSI

Deviso	Date Re	Date Collected	Matrix	Laboratory ID	Sample ID
10:6	11/67/L	98:91 .11/L7/L	Preservative Blank	E113108-01	1000-OSTH
10:6	11/67/1	St 60 II/LZ/L	Surface Water	E113108-02	HTSO-0022
10:6	11/67/1	St:60 11/LZ/L	Surface Water	E113108-09	HTSO-0024
10:6	11/67/L	70:41 11/27/7	Municipal Eff. Wastewater	E113108-07	HTSO-0018
10:6	11/67/L	70:41 11/27/7	Municipal Eff. Wastewater	E113108-09	HTSO-0020
10:6	11/67/1	LI:#I II/LZ/L	Wastewater	E113108-10	Et00-OSTH
10:6	I I/67/L	16:61 11/72/7	Wastewater	E113108-11	ht00-02TH
10:6	11/67/1	EI:EI II/LZ/L	Wastewater	E113108-15	St00-OSTH
10:6	11/67/1	LI:#I II/L\Z/L	Wastewater	E113108-16	6400-OSTH
10:6	11/67/1	18:81 11/ <i>L</i> 7/ <i>L</i>	Wastewater	E113108-17	0\$00-OSLH
10:6	11/67/1	£1:£1 11/ <i>L</i> 7/ <i>L</i>	Wastewater	E113108-18	1500-OSTH
10:6	11/67/1	££:11 11/ <i>L</i> 7/ <i>L</i>	Municipal Proc. Wastewater	E113108-19	HTSO-0033
10:6	11/67/1	11:11 11/ <i>L</i> Z/ <i>L</i>	Municipal Proc. Wastewater	E113108-20	HLZO-0052
10:6	11/67/1	£1:11 11/LZ/L	Municipal Proc. Wastewater	E113108-71	HLSO-0053
10:6	I I/67/L	\$0:91 11/LZ/L	Wastewater	E113108-22	TIO-0017
10:6	11/67/1	06:30	Surface Water	E113108-73	HTSO-0023
10:6	I I/67/L	08:60 11/L7/L	Surface Water	E113108-54	HTSO-0025
		`			·

				7				
•		. •						
	• .		•		•		• "	•
•								•
				•				
•			•			•		
								•
						·		
•					•		•	
		•					•	
	•							
,						•	:	
			•			t		
			•	,				
	/							
	• .							•
		e e			4.			
			•	•				
				•				
		•						
•		,		·	•			
			•					
		•				•		
	•		•				,	
•			* *					*
	•							
	*							
	•				•		•	
				, ,				`
		*		• .				
		•						
						•		
							•	
		•				,		
							t^*	
	, , , , , , , , , , , , , , , , , , ,			•				
	•		•	•				•
			•				•	
						,		
					•			*
			• • • • • • • • • • • • • • • • • • • •		i .			
				•				
	•							
							• •	

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY Region 4 Science and Ecosystem Support Division

Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700





Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres

DATA QUALIFIER DEFINITIONS

OR-1	MRL verification recovery less than lower control limits.
I-MO	Matrix Spike Recovery less than method control limits
	to be greater than the reported value.
. Т	The identification of the analyte is acceptable; the reported value may be biased low. The actual value is expected
K	The identification of the analyte is acceptable; the reported value may be biased high. The actual value is expected to be less than the reported value.
ſ	The identification of the analyte is acceptable; the reported value is an estimate.
D-2	Due to Matrix Interference, the sample cannot be accurately quantified. The reported result is qualitative.
СК	Presence of a large amount of black precipitate present in sample both before and after digestion and could have resulted in matrix interference.
· ¥	The analyte was analyzed in replicate. Reported value is an average value of the replicates.
·N	The analyte was not detected at or above the reporting limit.

YCKONKWZ VND YBBKEAIYLIONZ

	Tentatively Identified Compound - An analyte identified based on a match with the instrument software's mass spectral library. A calibration standard has not been analyzed to confirm the compound's identification or the
,	Minimum Reporting Limit - Analyte concentration that corresponds to the lowest demonstrated level of acceptable quantitation. The MRL is sample-specific and accounts for preparation weights and volumes, dilutions, and moisture content of soil/sediments.
	Method Detection Limit - The minimum concentration of a substance (an analyte) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero.
	Note: Analytes with no known CAS identifiers have been assigned codes beginning with "E", the EPA ID as assigned by the EPA Substance Registry System (www.epa.gov/srs), or beginning with "R4-", a unique identifier assigned by the EPA Region 4 laboratory.
CAS	Chemical Abstracts Service

estimated concentration reported.

	•	
•		
•		
		•
·	•	
·	the second secon	
	•	·
	•	
		•
		. Note that the second of the
· ·		•
•		
•		
	•	•
		•
)		
	,	
		•
•		
•		
		•
	,	
	,	
	,	
	,	

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY Region 4 Science and Ecosystem Support Division 980 Cellege Station Road Athens Georgie 20606 3700

Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0591

SALVA CONTRACTOR

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Sciffes

Classical/Nutrient Analyses

Project: 11-0591, Hattiesburg South Lagoon CSI

Lab ID: <u>E113108-01</u>

Matrix: Preservative Blank

Station ID:

Sample ID: HTSO-0001

Date Collected: 7/27/11 16:36

1 EPA 365.1	1/51/8 I	1/21/8	0.010	J\gm	0.010 U, J, QR-1		Total Phosphorus	7723-14-0
T EPA 353.2	1/81 //7/8 1	91-81 1/b7/8	0.050	J/gm	U 080.0		M as simith should	E701177
EPA 351.2	1:71 1/01/8 I	91:21 1/01/8	020.0	J\gm 	0.050 U, J, QR-1	uəge	Total Kjeldahl Nitro	E17148461
EPA 350 1	7 ti 8 ti	1/60/8	0\$0.0	J/gm .	Ú 080.0	Bur Sala	N 28 8100mmA	L+11-199L
роцым раз	(увиу ра	Prepar	WKT	sjiuf	Results Qualifiers		y y y y y y	Jaquin SVO

•
1
•
· ·
)
,
.*

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0591

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres



Classical/Nutrient Analyses

Project: 11-0591, Hattiesburg South Lagoon CSI

Lab ID: E113108-05 Matrix: Surface Water Sample ID: <u>HTSO-0022</u> Station ID: <u>DNSTRM</u>

Date Collected: 7/27/11 9:45

SM 2540D	01:17	01:12 8/03/11	0.4	J\gm	LT	Total Suspended Solids	E1642818
ZW SS10B	#0:6 11/67/L	11/67/L	0.2	J\gm	$L^{\chi_{i_1}}$	BOD, S Day	E1640606
роцыу	рагуриу	pandaid pared	WET	siinU	Results Qualifiers	ajújuuy	1əquin _N
	55 440		,,,,,,,				SVO

75:41 II/0E/6

				•	
					<i>;</i> ·
					•
		·			
•					
•	•				
					•
·.				•	
		,			
			•		
		· .•			
				. '	
	•			•	
		•		•	•
				•	•
.•			·		
			e.		
	•				
				·	
				•	
•	•		•		
·					•
	:			•	
				,	
			•		
				•	
	,	,			
		. *•		·	
					V.

DARKT Id: 11-0591 PREGION 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 DARKT Id: 11-0591

AGENCY STATES OF THE PARTY OF T

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres

Classical/Nutrient Analyses

Project: 11-0591, Hattiesburg South Lagoon CSI

Lab ID: E113108-06
Matrix: Surface Water

Sample ID: HTSO-0024
Station ID: DNSTRM

Date Collected: 7/27/11 9:45

	EPA 365.1	11/51/8	8/17/11 \$\$	0.010	J/gm	82.0	Total Phosphorus	0-41-6277
	EBV 3235	18:16 11/47/8	18.16 11/52/8	050.0	7/3m	**	N as airtiMalsuiN	E301131
	EPA 351.2	91:71 11/01/8	91:21 11/01/8	050.0	J\gm	1.1	Total Kjeldahl Nitrogen	E17148461
21/	E5V 3201	11/11/8	87.6 11/60/8	050.0	J/9m	ZE0	N ss sinommA	L-1 v-v 99L
	Метов	pazkjouy	berngerd	MKT	sim	Results Qualifiers	Signary .	60 (A) (B) (B) (B) (B) (B)
		74	W			经产品的 医甲基甲基酚 医二氯基	《中国》,"阿尔斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯斯	SVO

			•		
	•	1			
	· ·			. •	
	6			•	
	•				•
			·		
					,
			•		
	,				
•		`		•	
				•	
		,			•
	•				
	•				
			•		
	' .				
	•				
				•	
			•	•. •	
	·				
·					
					•
•					
		, e			
•		, e			
		, e			
		, e			
		, e			
		, e			
		, e			
		, e			
		, e			
		, e			
		, e			
		, e			
		, e			
		, e			
		, e			
		, e			
		, e			
		, e			
		, e			
		, e			
		, e			
		, e			
		, e			
		, e			
		, e			
		, e			
		, e			
		, e			
		, e			
		, e			
		, e			

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id. 11-0591

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres



Classical/Nutrient Analyses

Project: 11-0591, Hattiesburg South Lagoon CSI

Lab ID: <u>E113108-07</u>

Matrix: Municipal Eff. Wastewater

Sample ID: <u>EFF001</u>
Station ID: <u>EFF001</u>

Date Collected: 7/27/11 14:02

940D	II SM 2	1:17 /£0/8	01:12 11/60/8	0.4	J\gm	Lt	E1642818 Lotal Suspended Solids
8010	s ws 🖁	1733 1738/	SE-ZI 11/6Z/L	07	7/ 3 w	V 87	E1640606 - BOD, 5 Day
P	цың раз	(louy j	Preparea	MKT	siinU 🖽	Results Qualiflers	onlynuy soquing

E113108 CNY ŁINYT 6\;30\11 14:24

	·	
·		
	•	
·		
	• •	
	1	

980 College Station Road, Athens, Georgia 30605-2700 Region 4 Science and Ecosystem Support Division UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

D.A.R.T. Id: 11-0591

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres



Classical/Nutrient Analyses

Project: 11-0591, Hattiesburg South Lagoon CSI

Tab ID: <u>E113108-09</u>

Matrix: Municipal Eff. Wastewater

Station ID: <u>EFF001</u> Sample ID: HTSO-0020

70:41	11//7//	Date Collected:
60.11		. B. 12 - 11 - 12 - 14 - 17

11 EPA 365.1	1:51 55:8 /S1/8 11/21/8	8 0.I	J\gm	H	Total Phosphorus	0-41-8277
L EPASSEZ	(-81) 91-81 10-72	0.050	ு புதிய	090'0	N is surity signification	EZO1143
	1:71 91:71 /01/8 11/01/8	_	J\gm	68	Total Kjeldahl Nitrogen	E11148491
1 EPA 350 II	711/8 11/60/1 14/00/1	05:0	1. 7/8ui	61	Viss sinommA	L-11-199L
роцыу рэг	gouy pəsvdə	MKT L	sinU	results Qualifiers	yingy	<i>waquin</i> N

				•
	•			•
			•	
				•
		•		
	•			Walter State of the Control of the C
			A Company of the Comp	•
			•	
		•		•
				•
·				
		·		
•			•	
	•			
· ·				
•				
			•	
			•	
				•
,				
				·
	•			
				i
	•		,	*
			1	•
	*			,
			•	
	•			
	•			
			•	
		ĺ	•	

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0591

Classical/Nutrient Analyses

OUT AGENCY

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Sciffes

120 googs I drugg Prudseitte H 1020-11 raei

Project: 11-0591, Hattiesburg South Lagoon CSI

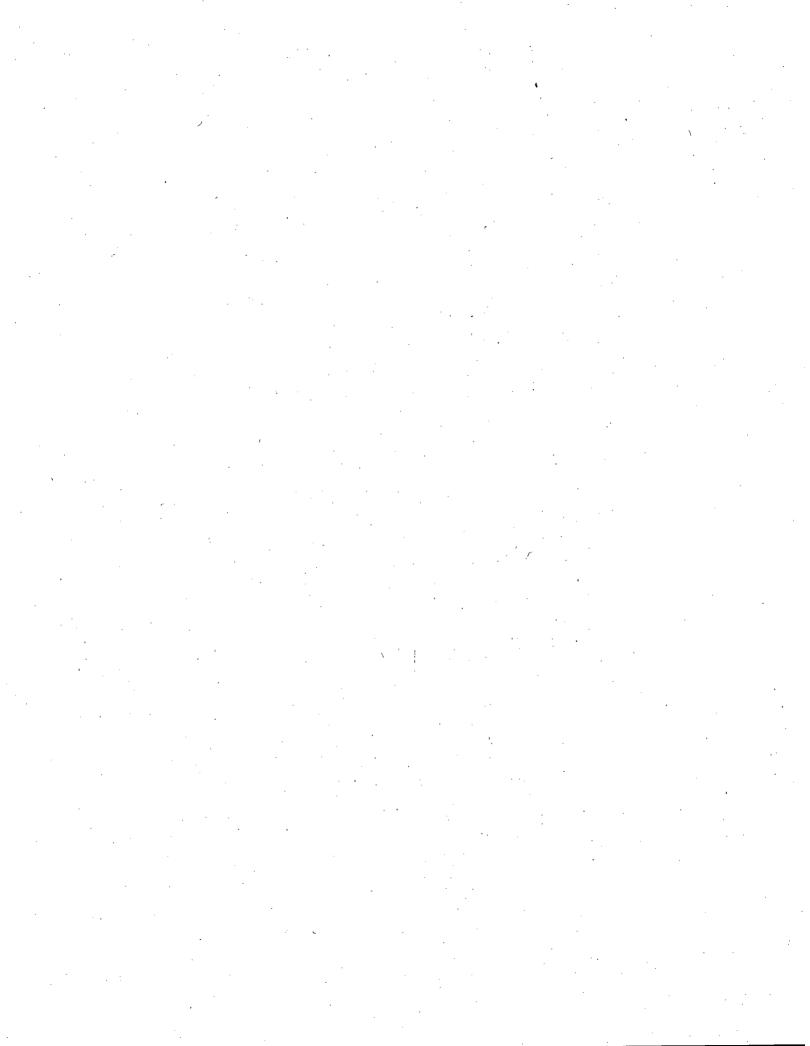
Lab ID: E113108-10
Matrix: Wastewater

Station ID: <u>INFL</u>

Sample ID: HTSO-0043

Date Collected: 7/27/11 14:17

						•	· ·	
•	SM 2540D	01:12 11/60/8	01:17 11/60/8	0.1/	J\gm	L8 '	Total Suspended Solids	E1642818
	2W 2510B	11/67/£	24:Z1 11/67/2	0.2	ng/F	V 18	BOD' 2 Day	E1940909
	роціаці	pə2.Spouy	Prepared	' WKT	shiri	Results Qualifiers	Modent	.taquin _N
	144							SVO



ONITED STATES ENVIRONMENTAL PROTECTION AGENCY 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0591

AGENCY AGENCY OF THE PROBLEM OF THE

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Sciffes

Classical/Nutrient Analyses

Project: 11-0591, Hattiesburg South Lagoon CSI

Lab ID: E113108-11

Station ID: INFL

Sample ID: HTSO-0044

Date Collected: 7/27/11 13:31

	`	E1642818
970 T	BOD' 2 DW	E1940909-
Results Qualiflers Units MRL Prepared Analyzed Method	Siylonk	taquin _N



D.A.R.T. Id: 11-0591 980 College Station Road, Athens, Georgia 30605-2700 Region 4 Science and Ecosystem Support Division UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Classical/Nutrient Analyses

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres

Project: 11-0591, Hattiesburg South Lagoon CSI

Tab ID: <u>E113108-12</u>

Matrix: Wastewater

Sample ID: HTSO-0045

Date Collected: 7/27/11 13:13

Station ID: INFL

7540D	MS 11	1/80/8	01:12 11/60/8	0.4		590	E1942818 Lotal Suspended Solids
2510B	ws i	1130/L	85:11 - 11/67/L	0.2	J/gm	340	E1940909 BOD' 2 Day
роц	ojų por	Appuy	Prepared	NBT	sinU	Results Qualifiers	ynwpcz ywążąc CY2

+5:tl II/0E/6

21:10 SM 2540D

01:12

	· .	
•		
	•	
·		
	•	
•		
•		
		·
•	,	
	·	
•		
	•	
	,	

NITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0591

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres



Classical/Nutrient Analyses

Project: 11-0591, Hattiesburg South Lagoon CSI

Tab ID: E113108-16

Matrix: Wastewater

Station ID: <u>INFL</u>

Sample ID: HTSO-0049

Date Collected: 7/27/11 14:17

0-11-8222	zmodazody letoT		1-40 161		.01	8/17/11	11/51/8	EDV 392 1
E701177	M. as surtit/Sterrit/		n 050°0	J/8m	0.050	91.81 11/5/2/8	11/42/8 18.16	HPA 3532
E17148461	Total Kjeldahl Nitrogen		61	J\gm	0.1	91:71 8/10/11	91:71 11/01/8	EPA 351.2 ·
_ L-1 1-19 92	V sa sinommA	Action and the second	£ 6	4 J \gm 4 1	05:0	87.6 11/60/8	11/11/8	EPA 350.1
Anunpa. CV2	majouy		Results Qualifiers	siinU	MET	horagord	pəz/(puy	роуну

•			•
			•
	^		
			·
	•		
		•	
•			
	•	· .	
		·	
			•

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. 1d: 11-0591

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres

NON SON TO STATE OF S

Station ID: INFL

Sample ID: HTSO-0050

Classical/Nutrient Analyses

Project: 11-0591, Hattiesburg South Lagoon CSI

Lab ID: <u>E113108-17</u>

Matrix: Wastewater

Date Collected: 7/27/11 13:31

EPA 365.1	\$1:\$1 11/\$1/8	8/15/11	0.1	J\gm	11 J, D-2	Total Phosphorus	0-41-6277
EPA 353.2	91:81 11/47/8	91.81 11/47/8	050.0) ։ Դնա 🖟 ։	SL'0	Wittale/Wittile as W	<i>EL</i> 010 <i>L</i> 1
EPA 351.2	91:71 11/01/8	91:71 11/01/8	0.8	J\gm	110 CK' D-7	Total Kjeldahl Nitrogen	E17148461
EBY 320 I	11/11/8 	87.66 87.60/8	08.0	Душ.	8.8	Nisa sinommA	L-1 t-19 9L
рочың	paz(pouy	prepared	WKT	sint)	Results Qualifiers	Julina	Number CAS

\$\$:\$I II/0E/6

			,		
	•			· · · · · · · · · · · · · · · · · · ·	
				·	
			•		
					•
					•
			e e e e e e e e e e e e e e e e e e e		
			•		
	·			•	
		•	,		
		·			
		•	•	*	٠.
		•	•		
	•	,			
			•	•	
		· .		· · · · · · · · · · · · · · · · · · ·	• •
	•				
		• 1		*	
• •					
			•		
			•		
	· ·	•			
			•		
			:		
			:		
			:		
			:		
·			:		
			:		
			:		
			:		
			:		
			:		
			:		
			:		
			:		
			:		
			:		
			:		
			:		
			:		
			:		
			:		
			:		
			:		
			:		
			:		
			:		
			:		

Region 4 Science and Ecosystem Support Division **CONTROL STATES ENVIRONMENTAL PROTECTION AGENCY**

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres

D.A.R.T. Id: 11-0591 980 College Station Road, Athens, Georgia 30605-2700



Station ID: INFL

Sample ID: HTSO-0051

Classical/Nutrient Analyses

Project: 11-0591, Hattiesburg South Lagoon CSI

T'sp ID: <u>E113108-18</u>

Matrix: Wastewater

Date Collected: 7/27/11 13:13

Nitale/Nitrite as N	
	E701177
Total Kjeldahl Vitrogen 39 mg/L 1.0 12.16 12.16 EPA 351.2	E17148461
Ammonia as N	L-14-499L
Anadyte And Anadyte And Challflers Units MRL Prepared Analyted Method	CAS Number

	v		
·			
•			
		* •	
		·	•
	•		•
			÷
• •			
•	·	·	
			•.
			· •
•			
·			
		,	
		•	
		•	
		•	
			•
		•	•
			•
		,	
		t e	
		•	•
·			
· .		•	
		•	
			·
			•
		•	
		•	

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. 1d: 11-0591

AGENCY GALVES GALVER

E1642818

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres

Classical/Nutrient Analyses

Project: 11-0591, Hattiesburg South Lagoon CSI

Lab ID: <u>E113108-19</u>

Matrix: Municipal Proc. Wastewater

J\gm

Station ID: INT PROCESS SAMPLE

Total Suspended Solids

Date Collected: 7/27/11 11:33

Sample ID: HTSO-0033

100 A mg/L 2.0 7/29/1 7/29/1 SM 5210B
nousing nationally partially carry and configurate transport transport

96€

ts:t1 11/08/6

8/03/11 SM 2540D

0[:17 11/E0/8



ONITED STATES ENVIRONMENTAL PROTECTION AGENCY 980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. 1d: 11-0591 Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres



Classical/Nutrient Analyses

Project: 11-0591, Hattiesburg South Lagoon CSI

Lab ID: <u>E113108-20</u>

Matrix: Municipal Proc. Wastewater

Station ID: HTSO-0052

Date Collected: 7/27/11 11:11

SM 2540D	01:17	01:17	0.4	J\gm	061	Total Suspended Solids	E1642818
2M 2510B	11/62/L	1/56/11 1/56/11	50	A. J. gm htt.	V 86	BOD* 2 Day	E1940909
уроцюц	pazijouy	Prepared	WKT	sinU	Results Qualifiers	ənigouy	yanın yazı CAS

E113108 CNV LINYT

:
·
•
· · · · · · · · · · · · · · · · · · ·
•

NITED STATES ENVIRONMENTAL PROTECTION AGENCY 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0591

D.A.R.T. Id: 11-0591 Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Sciffes



Classical/Nutrient Analyses

Project: 11-0591, Hattiesburg South Lagoon CSI

Tup ID: <u>E113108-21</u>

Matrix: Municipal Proc. Wastewater

Station ID: INT PROCESS SAMPLE

Date Collected: 7/27/11 11:43

Sample ID: HTSO-0053

SM 2540D	11/60/8	01:17	0.4	J\gm	100	Total Suspended Solids	E1642818
E0175 WS	90:01 11/67/L	90:01 11/67/L	0.2	Jgm	₩ 29	BOD 2 Day	E1640606
роцыу	pəz(qouy	рэлодэгд	WKT	spun	Results Qualifiers	- Andbut.	Number Number



ONITED STATES ENVIRONMENTAL PROTECTION AGENCY 880 College Station Road, Athens, Georgia 30605-2700

980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0591 Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres



Classical/Nutrient Analyses

Project: 11-0591, Hattiesburg South Lagoon CSI

Lab ID: <u>E113108-22</u>

Matrix: Wastewater

Date Collected: 7/27/11 16:05

Station ID: PRETRY

Sample ID: HTSO-0012

	SM 2540D	01:17 11/60/8	01:17 11/£0/8	0.4	. J/gm	049	Total Suspended Solids	E1642818
151	E5V 3921	11/21/8	\$9:8 11/21/8	0.1	J\gm	11 1 D-7	Striongsond listof ()-#1-EZ <i>LL</i>
	EPA 353.2	91:81 11/\$2/8	91:81 11/ 5 2/8	050.0	J\gm	9.1	Witrate/Wirite as M	E701177
	80175 MS	07-61 11/67/L	11/67/L	2.0	1/3m	300 F	BOD 2 Day	E1940909
	EPA 351.2	91:71 11/01/8	91:71 11/01/8	0.2	J\gm	720 CB' D-7		E1114846
	1 0SE VAA	11/11/8	87.6 11/60/8	0.1		<u>76</u>		I+-+99 <i>L</i>
	роцыју	рэг.(үриү	psyndsta	NKT	sinU .	Results Qualifiers	экіриу.	19quun _N SV3

	•
	•
	•
	•
	•
•	
	·
	•
	:
	•
	· · · · · · · · · · · · · · · · · · ·
	•

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. 1d: 11-0591

A AGENCY SALVAS GOTING.

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Sciffes

Classical/Nutrient Analyses

Project: 11-0591, Hattiesburg South Lagoon CSI

Г³Р ID: <u>E113108-73</u>

Matrix: Surface Water

Station ID: UPSTRM

Sample ID: HTSO-0023

0E:6 [1/\Z\/] 9:30	MoD ate Colle	ĺ
--------------------	---------------	---

03/11 SM 2540D	7 01:17 8 11/60/8	0.4	J\gm	97 .	Total Suspended Solids	E1642818
80175 WS 1066	/L 3 11/62/L	-0.2	J/Su ,	70 K	BOD, 5 Day	9090+913
poyroji poziji	uv pamdar	A STAN	smu	Results Qualifiers	at/ann/	

	,					
		. ,				
•		· .				
					•	
				,		
•						
	· .				٦	•
			4		·	•
	. •	:				
						•
	•					
	•					
			•			
					•	
•		. •		•		
·			*			
						•
·						
	,			: .		
					•	
•	•	•				
	•		. *		*	
•						•
•	•					
· ·						
			• •			
			·	· .		
•			•			
·		,				·
				·		•
					٠.	•
			•	•		•
			•			
	•	٠	·			
•						
•						
•			,			
•					N.	
•		•		· ·		
	•	٠				

NILED STATES ENVIRONMENTAL PROTECTION AGENCY UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

980 College Station Road, Athens, Georgia 30605-2700
D.A.R.T. 1d: 11-0591



Classical/Nutrient Analyses

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres

Project: 11-0591, Hattiesburg South Lagoon CSI

Lab ID: E113108-24

Station ID: UPSTRM

Sample ID: HTSO-0025

Date Collected: 7/27/11 9:30

	EPA 365.1	†I:†I II/\$I/8	8/15/11	010.0	J\gm	91.0	7723-14-0 Total Phosphorus
	EER 323 S	1816	91/81 +11/67/8	050'0	m&jr	VFO.	E7011777 Mitrate/Minitelas.N
	EPA 351.2	91:71 11/01/8	91:71 11/01/8	050.0	J\gm	0.69 J, QM-1	E17148461 Total Kjeldahl Nitrogen
100	EBY 320.1	11/11/8	87:6 11/60/8	09010	J/gm - 1	z 110	M se sinommA 7-14-490
	Method	pazijouy	Prepared	NKL	siiu)	Results Qualifiers	Anmore Another SV)

\cdot	
	·
	,
	•

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY 880 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0591

SALES OF THE PROPERTY OF THE P

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Sciffes

BOD' 2 Day		08.861	0.2	J\gm	00.261		. 201	££1-6L	72.1	10	
CCS Dup (1108028-BSD1)	<u> </u>		<u>:</u>		Prepared a	& Analyze	/67//0:p	· II			
(rasa sessor) - a ss i					,	, ,	700/20 1				
				_							
BOD, 5 Day	.:	00.961	0.2	J\gm	00.891	\	101	££1-67			
SM 5210B				·	J	,					
CCS (1108078-BSI)					Prepared ,	& Analyze	:/6Z/L0 :p	11			
· .			٠					٠.			
вор, 5 рау		Ω	0.2	շ/ֈ							ì
SM 5210B											
Blank (1108028-BLK1)					Prepared 8	s Analyze	/67/L0 :p	• 11			
Batch 1108028 - C SM5210	TOB 0									<u> </u>	
oresitis 5 acourt 1999	dod v					4					
·											
				~ A	00.5011		6:00				<u> </u>
Total Suspended Solids		3.3000	0.4	J\gm	4.8300		€.89	631-69			WKT-5
SM 2540D WRL Verification (1108014-PS	(16.1				namdai i	λ Analyzeα	/CO/60 .b				
ed Minsuit, aciteogiacy 1910	(150				резсиеза	reznica v 18	/ £0/80 ·P	11			
•											
Total Suspended Solids		002.19	0.4	J\gm		009.09			\$86.0	10	
2M 2540D											
Duplicate (1108014-DUP2)		noS	rce: E11310	£1-6	Prepared	& Analyze	/£0/80 :p	. 11			
Total Suspended Solids		008.92	0.4	J\gm		26.100			2.65	01	
SM 2540D											
Duplicate (1108014-DUP1)		nos	rce: E11310	8-23	Prepared &	oszylsnA 2ec	/ξ0/80 :p	<u> </u>			
							·				
Total Suspended Solids		009.76	0.4	. Ղ/Ձա	009 96		101	-601-E8	1.22	01	
SM 2540D		009 20	O V	, Dem	003 30		101	001 60	CC 1	٠,	
CCS Dup (1108014-BSD1)		<u> </u>		_ `	Prepared 2	& Analyzed	/£0/80 :p				
(1452)1100111111111111111111111111111111111					,						
				_				•			
Fotal Suspended Solids	•	008.86	0.4	J\gm	009'96		102	83-109			
SM 2540D											
CCS (1108014-BSI)					Prepared	& Analyze	/£0/80 :P	11			
								(
Fotal Suspended Solids		n .	0.4	J\gm					`	·	ı
SM 2540D		•.									
Blank (1108014-BLK1)					Prepared	& Analyze	/£0/80 :p	- 11		.	
Batch 1108014 - C 2540 Sol	spilo										
							0000			· ·	601011
Analyte		Result	Junid	stin U	Level	Result	%KEC	Limits	RPD	C Di	Notes
• • •			Reporting		Spike	Source		%KEC		RPD	

			•
			•
	\$		•
			•
·			
			•
•			
·			
			. •
		•	
•			
	•		
·		•	
		N.	
		· ·	•
		•	

Region 4 Science and Ecosystem Support Division NULED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0591

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Sciffes



	•	•
C-130 MRL-2, 0.050000 71.0 70-130	I/gm 020.0 002250.0	F.035 A 93 M 25 BinommA
Prepared: 08/09/11 Analyzed: 08/11/11		MRL Verification (1108043-PS1)
01 64.2 011-09 9.29 007080.0 0000.1	1/дш 050.0 £6£0.1	AL CR RIHOUHID.
01 64.2 011-06 6.89 007080.0 0000.1	I/gm 020.0 £9£0.1	FPA 350.1 Ammonia as M
Prepared: 08/09/11 Analyzed: 08/11/11	Source: E113109-12	Matrix Spike Dup (1108043-MSD2)
		•
01 0440 011-06 4.56 09601.0 0000.1	I\gm 000.0 [640.]	N 255 sinommA
Prepared: 08/09/11 Analyzed: 08/11/11	Source: E113108-24	Matrix Spike Dup (1108043-MSD1) EPA 350.1
11/11/80 (barning 11/00/80 (barning)	AC SOLECTED ASSURED	(Idam should) and oding virtam
011-04 (364 00/000) 000011 (18III 000'0 (CIO'I	A CO BUILDING
011-06 2.59 007080.0 0000.1	l/gm 020.0 T210.1	EPA 350.1 Ammonia as N
Prepared: 08/09/11 Analyzed: 08/11/11	Source: E113109-12	Matrix Spike (1108043-MS2)
011-06 6.26 09601.0 0000.1	I/gm 0č0.0 0e£0.1	N 25 sinommA
		FPA 350.1
Prepared: 08/09/11 Analyzed: 08/11/11	Source: E113108-24	Matrix Spike (1108043-MS1)
01 864.0 011-09 2.19 0000.1	I/gm 020.0 02219.0	N as sinommA
Prepared: 08/09/11 Analyzed: 08/11/11	_ 	Eb V 320'1 FCS Dnb (1108043-BSD1)
11/11/60 -F-22-1-24 - 11/00/60 -F-22-24	. 4	(Idsa Evosott) and 35 I
011-06 9.16 0000.1	Ngm 020.0 02319.0	V as sinommA
		EPA 350.1
Prepared: 08/09/11 Analyzed: 08/11/11		CCS (1108043-BS1)
		•
n .	Ngm 0≷0.0 U	V ss sinommA
		EPA 350.1
Prepared: 08/09/11 Analyzed: 08/11/11		Blank (1108043-BLK1)
		Batch 1108043 - C 350.1 Ammonia
		•
336.00 5.82 20	Ngm 0.5 00.71£	BOD, 5 Day
Prepared & Analyzed: 07/29/11	TY ONLY VIT 100 IN OC	SM 5210B
I I/QC\/TO :hesviend & hesperarq	Source: E113108-12	Ouplicate (1108028-DUP1)
		Batch 1108028 - C SMS210 BOD
Spike Source %REC RPD Limit Notes	Result Limit Unit	Analyte

•	

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id. 11-0591

AGENCY OF THE PROBLEM

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres

Ок-1, U										
WKT-7		`	061-07	9'85		0.000000	J/gm	0.050	0.029300	EPA 361.2 Total Kjeldahl Mitrogen
			I	1/01/80:1	s Analyzed	Prepared 8				MRL Verification (1108052-PS1)
т-мб	20	₹0.€	011-06	611	09LSL'0	0000'1	J\gm	0.050	1.9482	EPA 351.2 Total Kjeldahl Vitrogen
				1/01/80 :1	s Analyzed	Prepared &	-IZREI	ce: E113103	Sour	Matrix Spike Dup (1108052-MSD2)
	50	<i>Γ</i> Ι <i>Γ</i>	011-06	8.19	011690	0000.1	J\gm	050.0	0219.1	EPA 351.2 Total Kjeldahl Vitrogen
			I	1/01/80 :1	bəzylsad z	Prepared &	8-24REI	ce: E113108	Sour	Matrix Spike Dup (1108052-MSD1)
7-WÒ			011-06	153	09LSL'0	0000.1	J\gm	050.0	1.9853	EPA 351.2 Total Kjeldahl Vitrogen
			I	1/01/80	Analyzed	Prepared &	-ITKEI	ce: E113109	Sour	Matrix Spike (1108052-MS2)
i-MQ			011-06	† 58	04469.0	1.0000	J\gm	0.050	5845.1	EPA 351.2 Total Kjeldahl Vitrogen
			I	1/01/80 :	bəzylsnA z	Prepared &	8-24RE1	ce: E113108	Sourc	Matrix Spike (1108052-MS1)
•	۶۱	702.0	011-06	. 101		2,3400	J\gm	050.0	73686	EPA 351.2 Total Kjeldahl Mitrogen
			. [1/01/80	bəzylsaA	Prepared &				TCS Dup (1108052-BSD1)
			011-06	. 101		7.3400	J\gm	0.050	7.3735	EPA 351.2 Total Kjeldahl Vitrogen
			I	1/01/80 :	bəzylenA 3	Prepared &				TCS (1108027-BSI)
n							J\gm	050.0	Ω	EPA 351.2 Total Kjeldahl Vitrogen
			ī	1/01/80 :	bəz <u>ylsnA</u> 2	Prepared &				Blank (1108052-BLK1)
										Batch 1108052 - C 351.2 TKN
			11/11/80 :	ynalyzed	7 11/60/80	Prepared: (MRL Verification (1108043-PS1)
						-				Batch 1108043 - C 350.1 Ammonia
Notes	RPD Limit	RPD	%REC Limits	%KEC	Source Result	Spike	√ stinU	Reporting Limit	KesnIt	Апајује

•	
·	
·	
·	
·	
	·
•	
•	
•	
•	
•	
• •	

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY 980 College Station Road, Athens, Georgia 30605-2700

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres



Classical/Nutrient Analyses (CNA) - Quality Control US-EPA, Region 4, SESD

Reporting

	11/\$1/8	Analyzed: 08	11/71/80	Prepared:	71-6	e: E11310	Sourc	Aatrix Spike (1108061-MS4)
							,	
	011-0	6 1.66	0.1551.0	0.50000	J/gm	0.010	08089.0	ernonqeonal Bro
<u> </u>								1.38£ Aq
	11/51/8	Analyzed: 08	/ 11/71/80	Prepared:	\$7-8	e: E113108	Sourc	Natrix Spike (1108061-MS3)
× ·								·
	0110	6 701	0.05550	0.50000	շ լ/Ձա	010.0	0.5632.0	otal Phosphorus
								1.38£ Aq
	11/51/8	Analyzed: 08	/ 11/71/80	Prepared:	L0-7	e: E113707	Sourc	Natrix Spike (1108061-MS2)
	,							
•	0-110	6. 101	007130.0	000000.0	շու <u>թ</u> ա	0.010	00695.0	otal Phosphorus
	011 0		0021700	00003 Q	1 /	0100		1.365.1
	11/51/8	Analyzed: 08	11/71/80	Prepared:	3-38RE1	e: E11310	Sourc	Matrix Spike (1108061-MSI).
01 76	Z.O 011-0	6 001		02704.0	J/gm	010.0	OF (OF ' O	otal Phosphorus
UI VO	60 011-0			052010	I/Bttt	010.0	04704.0	1.365 Aq
	11/51/8	Analyzed: 0	11/71/80	Prepared:				CS Dup (1108061-BSD2)
	7 1, 2 1, 0		11,01,00					
					A			
01 91	0-110	6 L.T.		02704.0	J\gm	0.010	0.39830	r. 585_Aq otal Phosphorus
	11/01/9	Analyzed: 0	11/71/90	riepareu:				CS Dup (1108061-BSD1)
. •	11/31/0	O .pozlog v	11/01/60	Dropozod				(1030 1908011) 40 55
		,						
	0110	6 001		02704.0	J\gm	010.0	09804.0	oral Phosphorus
· ·	11/01/0	0 :037 (1917.	11/71/00	'namdai r			·	CS (1108061-BS2)
	11/51/8	Analyzed: 0	11/21/80	Prepared				(28/1108011) 85
						•		
	011-0	6 101		0.40750	Л∖ցա	0.010	0.41110	otal Phosphorus
<u> </u>						<u> </u>		1.23£ Aq
	11/51/8	Analyzed: 0	/ 11/71/80	Prepared:				CS (1108061-BS1)
•								
l					J\gm	010.0	Ω	otal Phosphorus
		·						1.23£ Aq
	11/51/8	Analyzed: 0	11/71/80	Prepared:				slank (1108061-BLK2)
1					J/gm	010.0	n ·	otal Phosphorus
			•					1.23£ Aq
	11/\$1/8	Analyzed: 0	08/15/11	Prepared:	·			3 suk (1108061-BLK1)
							 	3atch 1108061 - C 365.1 TPhos
						<u>.·</u>	<u> </u>	
PD Limit Notes	IA stimi. J	%KEC I	Result	Level	siinU	Limit	Result	Analyte

RPD

%KEC

Source



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY 880 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id. 11-0591

AGENCY AGENCY AGENCY

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Scifres

S. 2.5.Aq Virate/Nitrite as N	0.49020	080.0	J\gm	00005.0		0.86	011-06	0 ≯ .€	10	• .
CS Dup (1108133-BSD1)				Prepared	& Analyze	7/\$7/80 :P	11			
•										
Vitrate/Vitrite as V	08574.0	0.050		0.50000		8.49	011-06			
2.£3£ Aq	,	0.00								
CS (1108133-BS1)				Prepared	szylenA 3	[/ * Z/80 :pa	I.I			
Vitrate/Vitrite as V	Ω	0.050	J/gm							Ω
2.53.2		020 0	2							
318nk (1108133-BLK1)				Prepared	szylanA 28	1/\$Z/80 :p				
Satch 1108133 - C 353.2 NO3-NO2								<u>, </u>	·.	
:										Ок-ι, υ
Surodporus	0.00500.0	0.010	J\gm	0.010000		0.98	70-130			MRL-2,
									· · ·	
MRL Verification (1108061-PS1)			-	Prepared:	11/21/80	bəsvlenA	11/\$1/80:			
otal Phosphorus	0.68550	010.0	J\gm	0.50000	0.20450	2.96	011-06	642.0	01.	
1.38£ Aq								· <u> </u>		
Natrix Spike Dup (1108061-MSD4)	ioS	rce: E11310	71-6	Prepared:	11/21/80	Analyzed	11/51/80:			
•										
Cotal Phosphorus	0.64850	010.0	J\gm	0.50000	0.1551.0	L'86	011-06	0.402	10	
r.38£ Aq								1		
Natrix Spike Dup (1108061-MSD3)	ioS	rce: E11310	\$-24	Prepared:	11/21/80	Analyzed	11/51/80:			
	-	,								
smodqsodq Isto	0.56550	010.0	J\ <u>ջ</u> m	00005.0	0.055500	102	011-06	829.0	10	
1.23£ Aq										
Matrix Spike Dup (1108061-MSD2)	ios	rce: E11320	L0-7	Prepared:	11/21/80	Analyzed	11/51/80:			
						:				,
otal Phosphorus	06272.0	0.010	J\gm	00005.0	007130.0	103	011-06	25.1	10	
r.38£ Aq								,		
Natrix Spike Dup (1108061-MSDI)	ios	rce: E11310	3-38KE	Prepared:	11/71/80	Analyzed	11/51/80:			
ernotpeoral lato	07883.0	0.010	J\gm	0.50000	0.20450	7 .96	011-06			
r.38£ Aq	_									
Aatrix Spike (1108061-MS4)	ios	rce: E11310	71-6	Prepared:	11/21/80	Analyzed	11/51/80:			
Satch 1108061 - C 365.1 TPhos										
	Result	Limit	stinU	Level	Result	%KEC	Limits	RPD	Limit	Notes
		Reporting		Spike	Source	224/0	%KEC		RPD	

		•			
			,		
					•
		• •			<i>,</i>
				·	
		• •			
	·				•
	. 1				
	•	•		•	· · · · · · · · · · · · · · · · · · ·
	•	·			
	·				
				, , , , , , ,	
					·
					,
	. •				•
			•		
					`
•		,	•		
· :		·			•
	·				· ·
		,			

D.A.R.T. Id: 11-0591 D.A.R.T. Id: 11-0591 D.A.R.T. Id: 11-0591



Vitrate/Nitrite as N

Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Sciffes Classical/Nutrient Analyses (CNA) - Quality Control

US-EPA, Region 4, SESD

EPA 353.2										
MRL Verification (1108133-PSI)				Prepared	& Analyze	1/ 7 7/80 :P	II			
Nitrate/Vitrite as N	0.94930	0.050	J\gm	0.50000	0.44340	101	011-06	2.10	10	
EPA 353.2					·					
Matrix Spike Dup (1108133-MSD1)	noS	rce: E11310	\$7-8	Prepared	e Analyze	[/ ≯ Z/80 :P				
	. ,			· ·	•					
Nivate/Nivite as N	0.93880	050.0	ղ/ցա	0.50000	044340	1.66	011-06			•
EPA 353.2						,				
Matrix Spike (1108133-MS1)	nos	rce: E11310	\$7-8	Prepared	szylenA &	. √ 1 7/80 :pa	11			
Batch 1108133 - C 353.2 NO3-NO2										
Апајуте	Result	Limit	Units	Level	Result	%KEC	timiJ	КРD	timiJ ·	Notes
		ЯшподэЯ		Spike	Source		%KEC		KPD.	

0.050000

0.048800

U WRL-2,

70-130

9.76

•	
•	
•	
·	
•	
	·
	·

NITED STATES ENVIRONMENTAL PROTECTION AGENCY Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Sciffes Project: 11-0591, Hattiesburg South Lagoon CSI - Reported by Jenny Sciffes



Notes and Definitions for QC Samples

0к-1	MRL verification recovery less than lower control limits.
с-мо	Matrix Spike Recovery greater than method control limits
QM-1	Matrix Spike Recovery less than method control limits
MBT-5	MRL verification for Mon-Potable Water matrix
Ω	The analyte was not detected at or above the reporting limit.

E113108 CAV FIAAL 9/30/11 14:54

				•					
						,			
,			•		•				
						•	•		·
		• •							
				•	·.	÷			
				· .					
			. r						
							. •		
						٠			
									·
·		· · · · · · · · · · · · · · · · · · ·			٠ .				
					•	٠.			
•							5 . • .		
		•						•	
: :						. ,			
		·							
		•							
					•				
	•			٠.					
		•		·.					





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 4

Enforcement and Investigations Branch 980 College Station Road Athens, Georgia 30605-2720

July 21, 2011

4SESD-EIB

MEMORANDUM:

SUBJECT: Compliance Sampling Inspection

Hattiesburg South & Hattiesburg North Wastewater Treatment Plant

Mile Min Cor.

Hattiesburg, Mississippi

SESD Project ID: 11-0591, 11-0592 (respectively)

FROM:

Richard Elliott, P.E.; Environmental Engineer

Enforcement Section

THRU:

Mike Bowden, Chief

Enforcement Section

TO:

Cesar Zapata, Chief

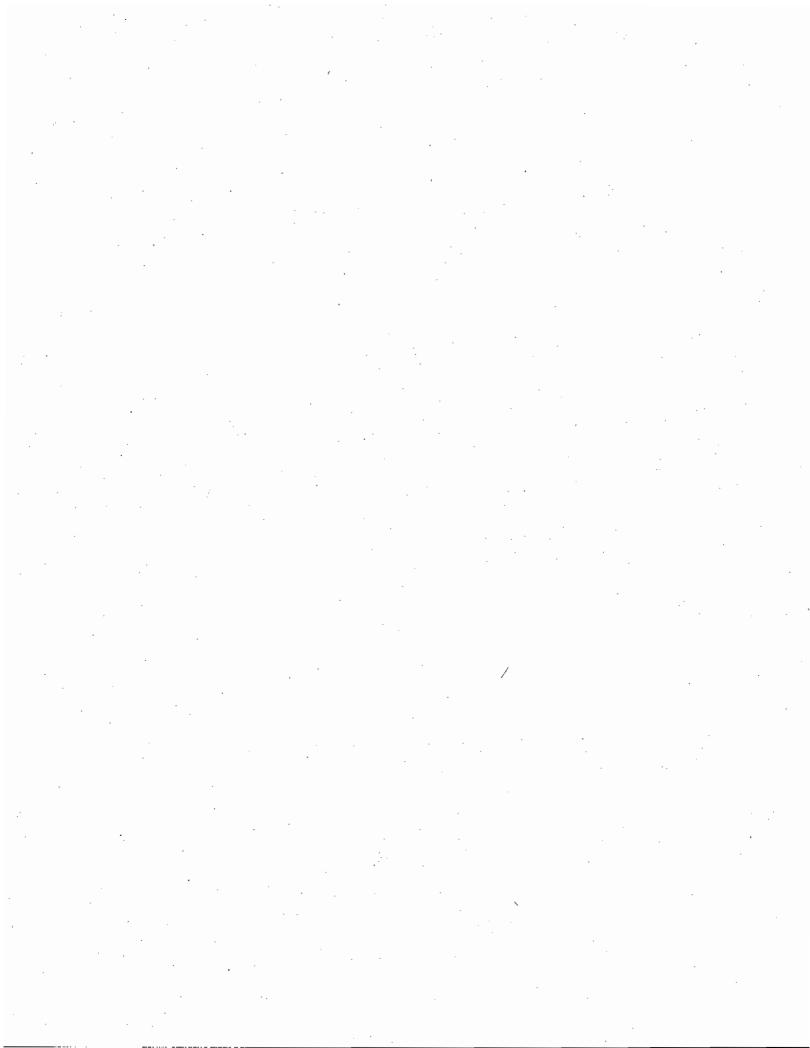
Municipal & Industrial Enforcement Section

Water Protection Division

Attached are copies of the Quality Assurance Project Plans for the Compliance Sampling Inspections (CSI) that will be conducted at the Hattiesburg South and Hattiesburg North Wastewater Treatment Plants on July 25 – 29, 2011. These facilities are located in Hattiesburg, Mississippi. The attached documents have not been distributed; please forward copies to the appropriate parties as needed. If you have any questions, please contact me by telephone at (706) 355-8631, or via email at Elliott.Richard@epa.gov.

		i i			
	,	•		•	
				•	•
		•			
			•		
	•				
		•			•
				•	•
	•		· · · · · · · · · · · · · · · · · · ·		
		•	•		
•		·			
				• •	
•					
	•				
				S	
		•	900	<i>S</i>	
•					*.
		•		•	
		•			
		••		•	
•					
		•	•	e e	•
	•				
	,				
			•		•
•				•	•
				•	
		•	•		
		·		•	
				<u>-</u> .	•
	•				
•				•	
		•	•	•	
			· · · · · · · · · · · · · · · · · · ·		
					•
				·	
		A			
		A			
		A			
		A			
		4			
		A			
		A			
		A			
		A			
		A			
		A			
		A			
		A			







Quality Assurance Project Plan U.S. Environmental Protection Agency Science and Ecosystem Support Division

Science and Ecosystem Support Division 980 College Station Road Athens, GA 30605

SESD Project ID: 11-0592 SESD Category 3 QAPP

	SECTION A: Project Planning Elements				
A1. Title (Project Name):	Hattiesburg North WWTP - Compliance	Sampling Inspection			
Project Location:	3401 Lakeview Rd., Hattiesburg, MS 394	401			
Project Requestor and Organization:	Cesar Zapata, Chief Municipal & Industrial Enforcement Section Water Protection Division USEPA – Region IV 61 Forsyth St. SW, Atlanta GA 30303-8960				
Project Leader's Name, Position, and Organization:	Richard Elliott, Environmental Engineer Enforcement & Investigations Branch (E				
Project Leader's Signature:	Sent II	Date: 1/21/2011			
Technical Reviewer's Name and Position:	Louis Salguero, Environmental Engineer				
Technical Reviewer's Signature:	Mount for	Date: 7/25/11			
Section Chief/DAO's Name and Position:	Mike Bowden, Chief (ES)				
Section Chief/DAO's Signature:	When Miss for	Date: 7/22 /11			
A2. Table of Contents	N/A				
A3. Distribution List	Hard Copy: Cesar Zapata, Chief Municip Section Electronic Copy: Mike Bowden, Chief E.				
A4. Project Personnel (list below):	Organization (list below):	Responsibilities (list below):			
Richard Elliott	EIB/ES	Project Leader			
Louis Salguero	EIB/ES	Safety Officer			
John Williams	EIB/ES	Sampler			
Cornell Gayle	EIB/ES	Sampler Trainee			
Hunter Johnson	EAB/ES	Surface Water Sampler			
Derek Little	EAB/ES	Surface Water Sampler			
Brian Herndon	ESAT	Scribe/Sampler			
A5. Problem Definition (Objectives) and Background:	SESD will collect samples at the Hattiesl Hattiesburg, MS to determine if the facilitheir NPDES permit. A cursory look at t	ity meets the requirements of			





Science and Ecosystem Support Division 980 College Station Road Athens, GA 30605

SESD Project ID: 11-0592 SESD Category 3 QAPP

revealed that they may not be meeting some of the limits specified in the NPDES permit. In addition, concerns regarding the color of the discharge from the facility into the receiving waters, and suspected mal odors emanating from the facility have precipitated this inspection.
This project is a compliance sampling inspection (CSI). SESD will collect 24-hr composite samples of the influent and effluent wastewater streams. Grab samples will also be collected if possible, from the major industries that discharge to the treatment facility.
Grab samples for specific parameters outlined in NPDES permit MS0020826 with be collected (see section B1).
Additional grab samples will be collected upstream and downstream of the WWTP effluent discharge point in the receiving water. These surface water samples will be analyzed for BOD ₅ , TSS, Ammonia Nitrogen (NH3-N), nitrite (NO2), nitrate (NO3), Total Kjeldahl Nitrogen and total phosphorus (TP). Continuous monitoring of dissolved oxygen, pH, conductivity, turbidity and temperature will be conducted over a 24-hr period in the receiving waters using an automatic data logging instrument.
Dissolved oxygen, pH, and temperature measurements will be made at various points within the treatment facility.
A rhodamine dye tracer test will be conducted to ascertain the hydraulic detention time of the wastewater in the facility.
An overall evaluation of the operating procedures at the WWTP including organic loading capacity will be conducted.
During this inspection, an evaluation of the self monitoring program of the facility will be conducted.
Quality Assurance (QA) preservative blanks will be analyzed for nutrients and metals.
SESD will evaluate the information gathered and provide all results and inspection reports to be utilized by USEPA Region 4 personnel in compliance decisions.

•	
•	
•	
•	
•	
·	
• •	
<i>i</i> *	
	·



Science and Ecosystem Support Division 980 College Station Road Athens, GA 30605

SESD Project ID: 11-0592 SESD Category 3 QAPP

Applicable regulatory information, action levels	40 CFR Part 122 40CFR Part 136 NPDES Permit MS0020826
Field Study Date:	July 25 – 29, 2011
Projected Lab Completion Date:	September 16, 2011.
Projected Final Report Completion Date:	The final report is expected to be completed within 30-days of receiving the analytical results from the laboratory. The anticipated completion date is October 14, 2011. The appropriate personnel will be notified if the expected report completion date cannot be met.
	be notified if the expected report completion date cambot be met.

A7. Quality Objectives and Criteria

All samples/sample locations meet the field investigation objectives and purposes summarized in Sections A5 and A6 of this QAPP.

A8. Special Training/Certifications

N/A.

A9. Documents and Records

For this project, SESD will implement the following procedures pertaining to Documents and Records:

SESD Operating Procedure for Report Preparation and Distribution, SESDPROC-003-R3.

SESD Operating Procedure for Logbooks, SESDPROC-010-R4.

SESD Operating Procedure for Control of Records, SESDPROC-002-R5.

SECTION B: Data Generation and Acquisition

B1. Sampling Design

The following matrix lists the proposed numbers and types of samples to be collected. Sample locations are described in Section A6 of this QAPP. As specified by the facility's NPDES permit, influent and effluent sample locations will be selected. Grab samples will be collected authoritatively based on conditions during the inspection.

Media:	Number of Samples:	Analyses:
Wastewater/Surface Water	(2) 24-hr composite	Biochemical Oxygen Demand (BOD), Total Suspended Solids

			•		
	4			· ,	
				•	
					•
	·				•
	•				
	l				
	•		•		
		•	•		
• •	•				•
			•	· · · · · · · · · · · · · · · · · · ·	
	:	•			
	•				
	•				
•					•
		.,	•		
•			•		
		;	•		
				•	
		•			
			•		
					<i>:</i>
•	•	•			
•	•				,
•	\	•			
	.,				
•			•		
•				•	
•	:		•		
	•				
			*		•
	·			•	
					•
		•			· Ç
			•		
•					
		•			
					•
	•				
	•		•		
		•			
		,	•		
		•			
•					•
•					
		•		•	
			,		•
	•			•	•



Science and Ecosystem Support Division 980 College Station Road Athens, GA 30605

SESD Project ID: 11-0592 SESD Category 3 QAPP

·	(TSS), Nutrients (Nitrogen &
 	Phosphorous)
	pH, Dissolved Oxygen (DO),
	Bacterial (E. coli), Nutrients
	(Nitrogen & Phosphorous) –
7 Grab and/or in-situ	Upstream & Downstream of
	Effluent Discharge, Preservative
	Blank (Nutrients), Temperature
	Blank

B2. Sampling Methods, General Procedures

The following SESD field measurement and sampling procedures will be followed during this field study, as applicable:

SESD Operating Procedure for Field pH measurement, SESDPROC-100-R2

SESD Operating Procedure for Field temperature measurement, SESDPROC-102-R3

SESD Operating Procedure for Field dissolved oxygen measurement, SESDPROC-106-R2

SESD Operating Procedure for Field wastewater flow measurement, SESDPROC-109-R2

SESD Operating Procedure for Global Positioning Systems, SESDPROC-110-R3

SESD Operating Procedure for Field wastewater sampling, SESDPROC-306-R2

SESD Operating Procedure for Field surface water sampling, SESDPROC-201-R1

SESD Operating Procedure for Field Dye Tracer Measurement, SESDPROC-514-R0

Composite samples will be collected using an ISCO 3700 or 6700 automatic sampler.

B3. Sampling Handling and Custody

All samples will be collected and handled according to the procedures listed in Section B2 of this QAPP. After collection, samples will be managed according to the following:

SESD Operating Procedure for Sample and Evidence Management, SESDPROC-005-R1. SESD Operating Procedure for Packing, Labeling and Shipping of Environmental and Waste Samples SESDPROC-209-R2.

Sample analyses will be divided between the Mississippi Department of Environmental Quality (MDEQ) and the SESD Region 4 laboratory. The MDEQ laboratory will analyze samples for Fecal Coliform. SESD Region 4 laboratory will analyze for all other parameters listed in this document. Custody of samples relinquished to MDEQ will be maintained by MDEQ personnel in accordance with their respective operating procedures. Samples retained by SESD will be handled in accordance to the procedures specified in this document. A copy of all original chain-of-custody form used in this project will be maintained by SESD personnel as part of the project file.

B4. Analytical Methods

The following is a brief description of the analytical methods for this field investigation:





Science and Ecosystem Support Division 980 College Station Road Athens, GA 30605

SESD Project ID: 11-0592 SESD Category 3 QAPP

Samples will be analyzed in accordance with the SESD Analytical Support Branch Laboratory Operations and Quality Assurance Manual, January 2011.
N/A
Samples will be analyzed by MDEQ in accordance with their standard analytical procedures.

implemented during this field investigation:

Field:	Field quality control measures will be in accordance with the SESD Operating Procedure for Field Sampling Quality Control, SESDPROC-011-R3, and 40 CFR Part 136.
Laboratory:	The MDEQ laboratory personnel will conduct all quality control analyses in accordance with their most current operating procedures. SESD analyses adhere to the quality control measures specified in the SESD Analytical Support Branch Laboratory Operations and Quality Assurance Manual, January 2011.

B6. Instrument/Equipment Testing, Inspection and Maintenance

All field measurement instruments and equipment will be maintained in accordance with the SESD Operating Procedure for Equipment Inventory and Management, SESDPROC-108-R3.

B7. Instrument/Equipment Calibration and Frequency

All field measurement instruments and equipment are calibrated according to the SESD Operating Procedure for Equipment Inventory and Management, SESDPROC-108-R3 and according to specific procedures included within the defined operating procedures for each instrument (see specific field measurement procedures in Section B2 of this QAPP).

B8. Inspection/Acceptance for Supplies and Consumables

All critical supplies and consumables for this field investigation are inspected and maintained in accordance with the following procedures:

SESD Operating Procedure for Purchasing of Services and Supplies, SESDPROC-015-R3. SESD Operating Procedure for Field Sampling Quality Control, SESDPROC-011-R3.

The SESD Field Quality Manager and the Branch Quality Assurance Officers are responsible for ensuring that these requirements are met.

		·.				a
•						
,						
•					,	,
			•			
	•	•		•		•
					•	
		,				
,		•		•		
		•		•		
)					
		·		•		
	:					
		•			•	
	.*					•
			•	*		
				,	•	
•			•			
			•	•		
			,			
	V				+ **	•
•						
	1.			•		
)	•			•
•						
	•			•		
	•				•	
	•				·.	
	•					
•		• •				
				•		
						,
	· :	•				·
				•		
	•	, .		•		
				,		
	·			•		
				•		
						4
	•	•	•			
		,				
					,	
		7				
•		. *		. \	•	
,	,	•				



Science and Ecosystem Support Division 980 College Station Road Athens, GA 30605

SESD Project ID: 11-0592 SESD Category 3 QAPP

B9. Non-direct Measurements:

N/A

B10. Data Management

The field project leader will be responsible for ensuring that all requirements for data management are met. All data generated for this field investigation, will be recorded, stored and managed accordance with the following procedures:

SESD Operating Procedure for Control of Records, SESDPROC-002-R5. SESD Operating Procedures for Logbooks, SESDPROC-010-R4.

SECTION C: Assessment/Oversight and SECTION D: Data Validation/Usability

The SESD Field Branches Quality Management Plan (QMP) and the SESD Operating Procedures address the Assessment/Oversight and Data Validation/Usability elements as required. Please consult those documents for more detailed information concerning the SESD Field Branches Quality System.

**Footnotes: This Quality Assurance Project Plan (QAPP) has been prepared and approved according to the EPA Requirements for Quality Assurance Project Plans (EPA QA/R5 EPA/240/B-01/003), U.S. Environmental Protection Agency, Office of Environmental Information, Washington, DC, March 2001(USEPA, 2001). This document will be used to ensure that the environmental data collected for this project are of the type and quality for the intended purposes. This document is for SESD use only.

	. •
	•
	•
	•
	,
•	•
	•
	•
	,
	•
	•



Science and Ecosystem Support Division 980 College Station Road Athens, GA 30605

SESD Project ID: 11-0591 SESD Category 3 QAPP

	SECTION A: Project Planning Elements	
A1. Title (Project Name):	Hattiesburg South WWTP - Compliance	Sampling Inspection
Project Location:	1903 East Hardy St., Hattiesburg, MS 39	401
Project Requestor and Organization:	Cesar Zapata, Chief Municipal & Industr Water Protection Division USEPA – Reg 61 Forsyth St. SW, Atlanta GA 30303-89	ion IV
Project Leader's Name, Position, and Organization:	Richard Elliott, Environmental Engineer Enforcement & Investigations Branch (E	IB)/Enforcement Section (ES)
Project Leader's Signature:	BASH	Date: 7/2/2011
Technical Reviewer's Name and Position:	John Williams, Environmental Scientist	
Technical Reviewer's Signature:	Mondo for	Date: 7/25/11
Section Chief/DAO's Name and Position:	Mike Bowden, Chief (ES)	
Section Chief/DAO's Signature:	Whele Mill to	Date: 7/22/11
A2. Table of Contents	N/A	
A3. Distribution List	Hard Copy: Cesar Zapata, Chief Municip Section Electronic Copy: Mike Bowden, Chief E	
A4. Project Personnel (list below):	Organization (list below):	Responsibilities (list below):
Richard Elliott	EIB/ES	Project Leader
Louis Salguero	EIB/ES	Safety Officer
John Williams	EIB/ES	Sampler
Cornell Gayle	EIB/ES	Sampler Trainee
Hunter Johnson	EAB/ES	Surface Water Sampler
Derek Little	EAB/ES	Surface Water Sampler
Brian Herndon	ESAT	Scribe/Sampler
A5. Problem Definition (Objectives) and Background:	SESD will collect samples at the Hattiesh Hattiesburg, MS to determine if the facilitheir NPDES permit. A cursory look at t	ty meets the requirements of

•				
•	,			
				•
			· ·	+ %
		•		
				•
	•	4 · 4 · · · · · · · · · · · · · · · · ·		
				•
		·		·
				•
		•		•
	•			
•	•			
			•	
			••	
	,			
·		•		
	_			
				·
	•			
	, .		•	
		•		•
				•
	•	•		
	· . \		·	•
·		•		
				·
		4 · · · · · · · · · · · · · · · · · · ·		



Quality Assurance Project Plan

U.S. Environmental Protection Agency
Science and Ecosystem Support Division
980 College Station Road
Athens, GA 30605

SESD Project ID: 11-0591 SESD Category 3 QAPP

	revealed that they may not be meeting some of the limits specified in the NPDES permit. In addition, concerns regarding the color of the discharge from the facility into the receiving waters, and suspected mal odors emanating from the facility have precipitated this inspection.
	This project is a compliance sampling inspection (CSI). SESD will collect 24-hr composite samples of the influent and effluent wastewater streams. A composite sample will be collected if possible, from one of the major industrial discharger to the treatment facility. If a composite sample is not possible for any industrial facility connected to the WWTP, grab samples will be collected wherever feasible.
	Grab samples for specific parameters outlined in NPDES permit MS0020303 will be collected (see section B1).
A6. Project Description:	Additional grab samples will be collected upstream and downstream of the WWTP effluent discharge point in the receiving water. These surface water samples will be analyzed for BOD ₅ , TSS, Ammonia Nitrogen (NH3-N), nitrite (NO2), nitrate (NO3), Total Kjeldahl Nitrogen and total phosphorus (TP). Continuous monitoring of dissolved oxygen, pH, conductivity, turbidity and temperature will be conducted over a 24-hr period in the receiving waters using an automatic data logging instrument.
	Dissolved oxygen, pH, and temperature measurements will be made at various points within the treatment facility.
	A rhodamine dye tracer test will be conducted to ascertain the hydraulic detention time of the wastewater in the facility.
	An overall evaluation of the operating procedures at the WWTP including organic loading capacity will be conducted.
· ·	During this inspection, an evaluation of the self monitoring program of the facility will be conducted.
	Quality Assurance (QA) preservative blanks will be analyzed for nutrients and metals.
Decision(s) to be made based on data:	SESD will evaluate the information gathered and provide all results and inspection reports to be utilized by USEPA Region 4 personnel in compliance decisions.

				•	
			·		,
·					•
		•			
·	<i>,</i>				
•		•			
•					
·.					,
	, 1				
		•			
. •		•	•		
	•		*		
	•	. "		•	
			•		
· .					•
			•		
	-			•	
	•			•	
		•		•	
		, .		•	
	•				
				•	·
	·		•		
	·				•
•					•
	•	•	•		
		•		•	
		•			
			'		
		* •		•	
	•				
	•				
	; ;	,	(
)			
		,(•		,
		•	•	:	
					•
•					



Science and Ecosystem Support Division 980 College Station Road Athens, GA 30605

SESD Project ID: 11-0591 SESD Category 3 QAPP

Applicable regulatory information, action levels	40 CFR Part 122 40CFR Part 136 NPDES Permit MS0020303		
Field Study Date:	July 25 – 29, 2011		
Projected Lab Completion Date:	September 16, 2011.		
Projected Final Report Completion Date:	The final report is expected to be completed within 30-days of receiving the analytical results from the laboratory. The anticipated completion date is October 14, 2011. The appropriate personnel will be notified if the expected report completion date cannot be met.		

A7. Quality Objectives and Criteria

All samples/sample locations meet the field investigation objectives and purposes summarized in Sections A5 and A6 of this QAPP.

A8. Special Training/Certifications

N/A.

A9. Documents and Records

For this project, SESD will implement the following procedures pertaining to Documents and Records:

SESD Operating Procedure for Report Preparation and Distribution, SESDPROC-003-R3.

SESD Operating Procedure for Logbooks, SESDPROC-010-R4.

SESD Operating Procedure for Control of Records, SESDPROC-002-R5.

SECTION B: Data Generation and Acquisition

B1. Sampling Design

The following matrix lists the proposed numbers and types of samples to be collected. Sample locations are described in Section A6 of this QAPP. As specified by the facility's NPDES permit, influent and effluent sample locations will be selected. Grab samples will be collected authoritatively based on conditions during the inspection.

Media:	Number of Samples:	Analyses:
Wastewater/Surface Water	(2) 24-hr composite	Biochemical Oxygen Demand (BOD), Total Suspended Solids

	C		•	
	•			
	•		•	
	g .		•	
			Þ	
				•
			•	
•		The second of the	· •	
				•
en en en en en en en en en en en en en e				
	•		· ;	
/		• .		
				N.
•				•
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \				
				. •
				•
				•
	•			•
•				
			1	
	·			•
•				
			•	•



Science and Ecosystem Support Division 980 College Station Road Athens, GA 30605

SESD Project ID: 11-0591 SESD Category 3 QAPP

		(TSS), Nutrients (Nitrogen & Phosphorous)
Blank	7 Grab and/or in-situ	pH, Dissolved Oxygen (DO), Bacterial (E. coli), Nutrients (Nitrogen & Phosphorous) – Upstream & Downstream of Effluent Discharge, Preservative Blank (Nutrients), Temperature

B2. Sampling Methods, General Procedures

The following SESD field measurement and sampling procedures will be followed during this field study, as applicable:

SESD Operating Procedure for Field pH measurement, SESDPROC-100-R2

SESD Operating Procedure for Field temperature measurement, SESDPROC-102-R3

SESD Operating Procedure for Field dissolved oxygen measurement, SESDPROC-106-R2

SESD Operating Procedure for Field wastewater flow measurement, SESDPROC-109-R2

SESD Operating Procedure for Global Positioning Systems, SESDPROC-110-R3

SESD Operating Procedure for Field wastewater sampling, SESDPROC-306-R2

SESD Operating Procedure for Field surface water sampling, SESDPROC-201-R1

SESD Operating Procedure for Field Dye Tracer Measurement, SESDPROC-514-R0

Composite samples will be collected using an ISCO 3700 or 6700 automatic sampler.

B3. Sampling Handling and Custody

All samples will be collected and handled according to the procedures listed in Section B2 of this QAPP. After collection, samples will be managed according to the following:

SESD Operating Procedure for Sample and Evidence Management, SESDPROC-005-R1. SESD Operating Procedure for Packing, Labeling and Shipping of Environmental and Waste Samples SESDPROC-209-R2.

Sample analyses will be divided between the Mississippi Department of Environmental Quality (MDEQ) and the SESD Region 4 laboratory. The MDEQ laboratory will analyze samples for Fecal Coliform. SESD Region 4 laboratory will analyze for all other parameters listed in this document. Custody of samples relinquished to MDEQ will be maintained by MDEQ personnel in accordance with their respective operating procedures. Samples retained by SESD will be handled in accordance to the procedures specified in this document. A copy of all original chain-of-custody form used in this project will be maintained by SESD personnel as part of the project file.

B4. Analytical Methods

The following is a brief description of the analytical methods for this field investigation:

	ζ.				
		•		•	
		•	•	•	
•				•	
					· .
				•	
		· .	* •	•	•
			•		
		•			•
	•				•
		•			
		•			
				,	
				•	
,					
			,		·
·	•			•	
•,		•			
	•				
	•	•			*.
				t	
		•			
	•	•			•*



Science and Ecosystem Support Division 980 College Station Road Athens, GA 30605

SESD Project ID: 11-0591 SESD Category 3 QAPP

SESD:	Samples will be analyzed in accordance with the SESD Analytical Support Branch Laboratory Operations and Quality Assurance Manual, January 2011.
CLP:	N/A
Other: MDEQ	Samples will be analyzed by MDEQ in accordance with their standard analytical procedures.

B5. Quality Control

The following is a brief description of field and laboratory quality control measures to be implemented during this field investigation:

Field:	Field quality control measures will be in accordance with the SESD Operating Procedure for Field Sampling Quality Control, SESDPROC-011-R3, and 40 CFR Part 136.
Laboratory:	The MDEQ laboratory personnel will conduct all quality control analyses in accordance with their most current operating procedures. SESD analyses adhere to the quality control measures specified in the SESD Analytical Support Branch Laboratory Operations and Quality Assurance Manual, January 2011.

B6. Instrument/Equipment Testing, Inspection and Maintenance

All field measurement instruments and equipment will be maintained in accordance with the SESD Operating Procedure for Equipment Inventory and Management, SESDPROC-108-R3.

B7. Instrument/Equipment Calibration and Frequency

All field measurement instruments and equipment are calibrated according to the SESD Operating Procedure for Equipment Inventory and Management, SESDPROC-108-R3 and according to specific procedures included within the defined operating procedures for each instrument (see specific field measurement procedures in Section B2 of this QAPP).

B8. Inspection/Acceptance for Supplies and Consumables

All critical supplies and consumables for this field investigation are inspected and maintained in accordance with the following procedures:

SESD Operating Procedure for Purchasing of Services and Supplies, SESDPROC-015-R3. SESD Operating Procedure for Field Sampling Quality Control, SESDPROC-011-R3.

The SESD Field Quality Manager and the Branch Quality Assurance Officers are responsible for ensuring that these requirements are met.

	•				•			
v.								
				•		•		
	•	• ,			1			
		1	•		Ŷ			
		. · · · · · · · · · · · · · · · · · · ·				. ,		
		: .					• •	
				•				
	,							
\' .					•			
,								
,								
,								•
,				·	i i			
•				•				
	• 1							
	•							
		* .						
,								
					:			
	•							
		$(e_{i_1}, \dots, e_{i_k}) \in \mathcal{C}$						
				•		•		
		*	. 1					
*	•							
					•	•		
	·							•
		,				•		
		. /						
				•				
			*					
				·				*
•	,					•		
		1.						
						•		
	•							
,								
,	· ·	•	•		•		•	
, .				•				
					6.7			
					,	•		
				•				
	· .		·			(
			•					
				•	•			
					•			
, ,				2				
* *						f		
						. /		
		•		·	<i>i</i> .			
	•							•
,		•		•				
	•			·				
		•		, , , , , , , , , , , , , , , , , , ,				
			·			•		
					•			
	· · · · · · · · · · · · · · · · · · ·							



Science and Ecosystem Support Division 980 College Station Road Athens, GA 30605

SESD Project ID: 11-0591 SESD Category 3 QAPP

B9. Non-direct Measurements:

N/A

B10. Data Management

The field project leader will be responsible for ensuring that all requirements for data management are met. All data generated for this field investigation, will be recorded, stored and managed accordance with the following procedures:

SESD Operating Procedure for Control of Records, SESDPROC-002-R5. SESD Operating Procedures for Logbooks, SESDPROC-010-R4.

SECTION C: Assessment/Oversight and SECTION D: Data Validation/Usability

The SESD Field Branches Quality Management Plan (QMP) and the SESD Operating Procedures address the Assessment/Oversight and Data Validation/Usability elements as required. Please consult those documents for more detailed information concerning the SESD Field Branches Quality System.

**Footnotes: This Quality Assurance Project Plan (QAPP) has been prepared and approved according to the EPA Requirements for Quality Assurance Project Plans (EPA QA/R5 EPA/240/B-01/003), U.S. Environmental Protection Agency, Office of Environmental Information, Washington, DC, March 2001(USEPA, 2001). This document will be used to ensure that the environmental data collected for this project are of the type and quality for the intended purposes. This document is for SESD use only.

						(
					•			•
				•	•			•
					•			
				•				
		•			,			
				•				
			•					
								•
	i							
					•		٠	
			• .					
						•		
			•					•
	· .	,		•				
					•			
	_						•	
•	•							
				•				
						•		
	•	1						
			•			-		
		,		•	·			
								·
		•						
			•					
	,				•			
				•				
	•		•		,	•	-	
	٠,							•
		:		•			. *	
								<i>,</i>
				·				



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 4

Enforcement and Investigations Branch 980 College Station Road Athens, Georgia 30605-2720



November 17, 2011

4SESD-EIB

MEMORANDUM:

SUBJECT: Compliance Sampling Inspection Report

Hattiesburg North Wastewater Treatment Plant

Hattiesburg, Mississippi SESD Project ID: 11-0592

FROM:

Richard Elliott, P.E.; Environmental Engineer

Enforcement Section

THRU:

Archie Lee, Chief

Enforcement Investigation Branch

TO:

Denisse Diaz, Chief

Clean Water Enforcement Branch

Water Protection Division

Attached is a copy of the report for the Compliance Sampling Inspection (CSI) conducted at the Hattiesburg North Wastewater Treatment Plant during the week of July 25, 2011. This facility is located in Hattiesburg, Mississippi.

The attached report has not been distributed. Please forward copies to the appropriate parties. If you have any questions, please contact me by telephone at (706) 355-8631, or via email at Elliott.Richard@epa.gov.

	•
\cdot	

United States Environmental Protection Agency Region 4

Science and Ecosystem Support Division

Enforcement and Investigations Branch 980 College Station Road Athens, Georgia 30605-2720



Compliance Sampling Inspection Report
Hattiesburg North Wastewater Treatment Plant
NPDES Permit MS0020826
3401 Lakeview Road
Hattiesburg, Mississippi 39401

SESD Project ID: 11-0592 Inspection Date: July 25 – 29, 2011

Requestor: Cesar Zapata, Chief
Municipal & Industrial Enforcement Section
Water Protection Division
USEPA – Region 4
61 Forsyth St. SW
Átlanta, Georgia 30303-8960

Project Leader: Richard Elliott, P.E. SESD Enforcement Section Enforcement and Investigations Branch 980 College Station Road Athens, Georgia 30605-2720

		•				
		•				
					•	
			•			
		•				
		•				
			· ;	•		
				•		
			•			
	• .					
			•			
		•				
	•					
•		•				
					•	
•		•		•		
		•		•		
		`				
• • •	•					
					•	
•			•		•	
			۴,			
						•
						`
						•
		× .			•	
	•					
						•
						,
		,				•
	•	,				
•					1	

Title and Approval Sheet

Title: Compliance Sampling Inspection Report

Hattiesburg North Wastewater Treatment Plant

Final Report

Approving Official:

Mike Bowden, Chief Enforcement Section Enforcement and Investigations Branch

Date

SESD Project Leader:

Richard Elliott, P.E. Enforcement Section Enforcement and Investigations Branch

Date

	•
· · · · ·	
	. •
•	
·	
. "	•
.*	1
	•
•	
	Ì
	•
(x,y) = (x,y) + (x,y) = 0	•
1	i
•	•
	•
	٠

Table of Contents

Compliance Sampling Inspection Report	1
Title and Approval Sheet	2
EPA Form 3560-3	
INTRODUCTION	5
BACKGROUND	5
SUMMARY OF FINDINGS & RECOMMENDATIONS	6
Findings	
Recommendations	6
FACILITY ASSESSMENT	
1. Facility Site Review	7
2. Permit Review	9
3. Records and Reports	9
4. Flow Measurement	
5. Operations & Maintenance	
6. Sludge Disposal	
7. Facility Sampling	
8. Effluent and Receiving Waters	
FACILITY/EPA DATA DISCUSSION	
EPA Sampling Methodology	
Quality Assurance/Quality Control	
CONCLUSIONS	
REFERENCES	
ATTACHMENTS	
END OF REPORT	19
<u>List of Tables</u>	
TABLE 1.0 (SESD SAMPLING ACTIVITIES)	11
TABLE 2.0 (INTERNAL PROCESS & PRETREATMENT SAMPLES)	12
TABLE 3.0 (HISTORICAL DATA REVIEW)	
TABLE 4.0 (SUMMARY OF SESD ANALYTICAL RESULTS)	15
<u>List of Figures</u>	
FIGURE A – HATTIESBURG NORTH WWTP AERIAL AND DIMENSIONS	Ω
FIGURE B – HATTIESBURG NORTH SAMPLE LOCATIONS AND TREATMENT SYSTEM LAYOUT.	18

		•	•	
	7-		٠.	
				· .
·				•
4				
		.*		•
		•		
			•	
		4.		
	•.			
	•		•	•
••				
•		•	•	•
				•
				••
				· ·
				•
•				
	•	,		
		. *		
-				
				·
				•
•				



United States Environmental Protection Agency Washington, D.C. 20460

Water Compliance Inspection Report

— Section A: National Data	System Coding (i.e.,	PCS)	
Transaction Code NPDES yr/mo/day	Inspection	Type Inspector	Fac Type
N MS0020826 11/07/26	S	J	1
Rem	narks		
Inspection Work Days Facility Self-Monitoring Evaluation Rating BI	QA	Reserved	
	Facility Data		
Name and Location of Facility Inspected (For industrial users discharging to POT and NPDES permit number)	W, also include POTW na	me Entry Time/Date	Permit Effective Date
Hattiesburg North WWTP 3401 Lakeview Rd., Hattiesburg, MS 39401	•	0830 07/26/2011	June 07 ,2010
3401 Lakeview No., Hattlesburg, W.S. 33401		Exit Time/Date 1600 07/28/2011	Permit Expiration Date May 31, 2015
Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s)	·		
Arnold Landrum, Water & Sewer General Manager, (601) 545-4530; and (601) 5	45-4689	descriptive information	g., SIC NAICS, and other i)
		<u> </u>	
Name, Address of Responsible Official/Title/Phone and Fax Number Mr. Matthew Boutwell, Director Water & Sewer,			•
900 James Street		.*	•
Hattiesburg, MS 39401 (601) 545-4530			
(601) 545-4689 Fax			
Section C: Areas Evaluated During Inspe	ection (Check only thos	se areas evaluated)	
X Permit X Self-Monitoring Prog	gram X Pretreatn	nent M	S4
X Records/Reports Compliance Schedu	les Pollution	Prevention	
X Facility Site Review Laboratory	Storm Wa	ater	
X Effluent/Receiving Waters X Operations & Mainte	enance Combine	d Sewer Overflow	
X Flow Measurement X Sludge Handling/Dis	sposal X Sampling		
Section D: Summary	of Findings/Comments		
(Attach additional sheets of narrative and checklists,			essary)
SEV Codes SEV Description	•		•
			Ċ
		•	
* See At	tachment		
Name(s) and Signature(s) of Inspector(s)	Agency/Office/Phone ar	nd Fax Numbers	Date
Richard Elliott	US EPA/706-355-8631	and 706-355-8744	
John Williams	US EPA/706-355-8735	and 706-355-8744	
Reviewer/Section Chief		·	
Mike Bowden	US EPA/706-355-8734	and 706-355-8744	Date

EPA Form 3560-3

	•						D.	
		•						
					•	•	•	• •
								7
					ŕ			
						·	•	• •
						•		
	**. * *					,		
			·					
		•		,				
					•			
								.'
,								
•			t.					* · ·
							· .	
						,		
		•						
					-			
							-	
								-
)				
	,							
			•					
	5	•		•				
			•					
	3 ·						•	
						• •		·
							•	
				1	*			
		-						
						•		
			•					
			٠.					
	•							
		<i>:</i>						
		•					•	
						•		
						•	•	
		•				, .		
•								
		•					:	
							•	

COMPLIANCE SAMPLING INSPECTION HATTIESBURG NORTH WASTEWATER TREATMENT PLANT HATTIESBURG, MISSISSIPPI NPDES PERMIT MS0020826

INTRODUCTION

During the week of July 25 – 29, 2011, representatives of the United States Environmental Protection Agency (USEPA) and the Mississippi Department of Environmental Quality (MDEQ) conducted a Compliance Sampling Inspection (CSI) at the Hattiesburg North Wastewater Treatment Plant (WWTP) in Hattiesburg, Mississippi. This inspection was requested by the USEPA Region 4 Water Protection Division in Atlanta, Georgia due to repeated non-compliance with the National Pollution Discharge Elimination System (NPDES) effluent permit limits and odor complaints from citizen.

The following individuals were present during the inspection:

ORGANIZATION		TELEPHONE
USEPA		706-355-8631
USEPA	•	706-355-8735
USEPA	•	706-355-8732
USEPA	•	706-355-8743
MDEQ		601-961-5094
WWTP		601-545-4530
WWTP		501-545-4531
	USEPA USEPA USEPA USEPA MDEQ WWTP	USEPA USEPA USEPA USEPA MDEQ WWTP

BACKGROUND

The overall objective of this CSI was to evaluate the operational performance of the WWTP and provide technical assistance. Specific tasks included characterization of the influent, assessing effluent quality, evaluating operations, reviewing effluent analytical data and other facility records. The following activities were conducted to meet the overall objective:

- Operational information was collected.
- Effluent composite samples were collected and analyzed.
- Grab samples for field parameters (e.g., pH, DO, and TRC) were collected.
- Wastewater from major industrial contributors were identified and characterized.
- The facility's self-monitoring program was evaluated.

Page 5 of 19 Project #:11-0592

			•		
	; ,				
	• .				
	•	. •			
·	• •			-	
	•				
	•				
			•		
			,	•	
	•				
	•				
			•		
		P1			
	:		•		
	•			•	
	,		.•	•	
		•		•	
					•
			•		
	•				
		e V			-
		•			
			•		
				·	
		•			
	•				
•					•
			•		
	•	,			
	•				
	•			ĺ	
					•
				•	
		•			
					•
	<u> </u>			•	•

SUMMARY OF FINDINGS & RECOMMENDATIONS

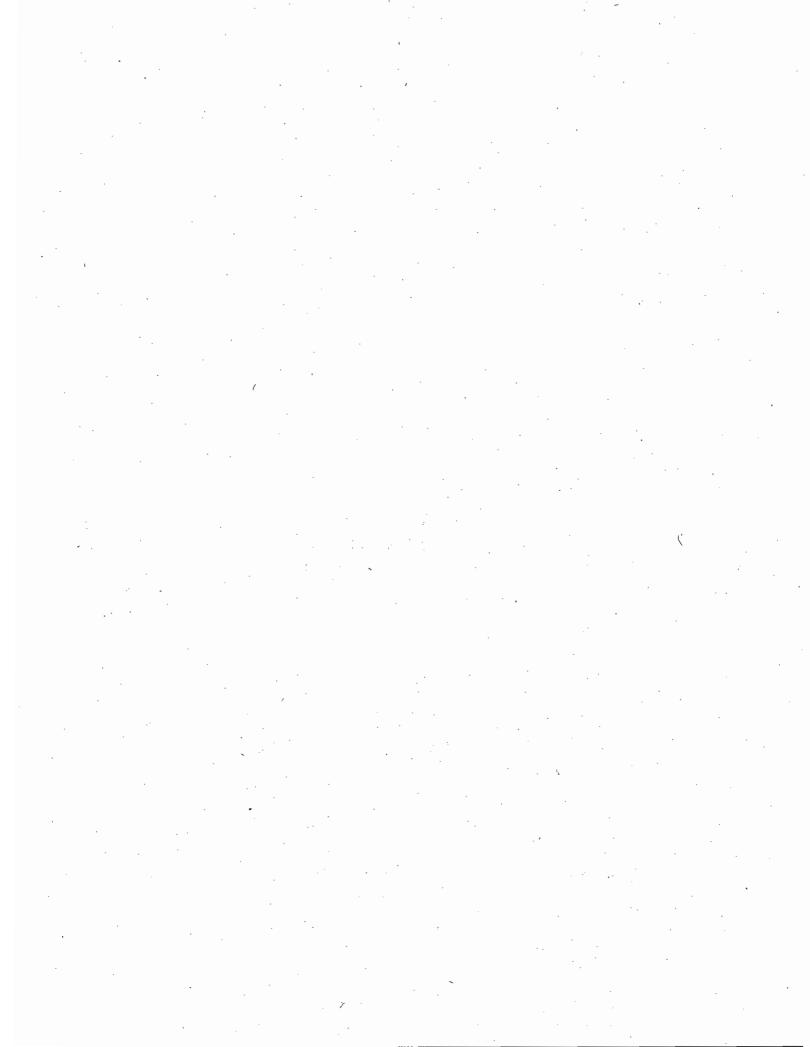
Findings

- 1. There was visual evidence of short circuiting from dye testing that was conducted during the EPA study.
- 2. Analysis of the industrial influent wastewater indicated high organic loadings. The TSS influent concentration from the industrial contributor was above typical domestic wastewater values.
- 3. Excessive algae/duck weed growth was observed in lagoon #3 (see Figure A).
- 4. Dead-zones were observed in all three lagoons.
- 5. The effluent flow meter did not meet NPDES requirements. It did not have a flow totalizer and/or chart recorder.
- 6. There was no septic waste hauler handling facility at the plant.
- 7. The influent wastewater distribution was not optimized for best treatment. Most of lagoon #2 is not utilized for treatment since it does not directly receive influent wastewater (see Figure B).
- 8. Aerators were mainly located at the edges and corners of the lagoons and were not properly distributed in the treatment system to provide sufficient aeration for the entire lagoon.
- Historical data review indicated that the permittee exceeded their NPDES permit limits on several occasions for the following parameters: BOD₅, TSS, TRC, and Fecal Coliform.

Recommendations

- 1. A totalizer and chart recorder should be installed to operate in conjunction with the flow measuring device. Alternatively, the facility should print daily flow charts and totalized flows from their SCADA computer system and maintain these print out as records.
- 2. Implement a structured pretreatment program to monitor pollutants from industrial users, set discharge limits, and provide regular inspections.
- 3. Excess sludge in the lagoon(s) should be removed in a timely manner and properly disposed of in accordance with the appropriate federal and state regulations.
- 4. An onsite septic waste receiving station should be constructed to properly handle septic haulers.

Page **6** of **19** Project #:11-0592



- 5. The aerators in the influent receiving lagoons should be positioned to adequately supply oxygen to the entire lagoon and assist in wastewater flow directing.
- 6. Wastewater operation and maintenance training should be provided to staff.
- 7. The City should seek engineering consultation to address capacity concerns and short circuiting in the lagoons.
- 8. The influent distribution system should be redesigned to minimize overloading and fully utilize all available treatment units.
- 9. The permit should stipulate composite sampling for parameters such as BOD₅, TSS and numeric limits for nutrient loadings such as NH₃-N.

FACILITY ASSESSMENT

The following discussion (pages 07 - 10) pertains to the areas evaluated in section C of the NPDES 3560 form.

1. Facility Site Review

The Hattiesburg North WWTP is permitted to treat a 4.0 MGD of wastewater. The facility is located at 3401 Lakeview Road in Hattiesburg, Mississippi. The WWTP treats domestic and industrial wastewater from the City of Hattiesburg. The bulk of the industrial wastewater comes from a dairy product manufacture (Dairy Fresh/Borden Dairy). The plant consists of three lagoons with floating aerators and an effluent disinfection chlorine contact chamber. One of the lagoons appears to have a flow directing or floatable containing baffle. Influent enters lagoon #1 and flows to both Lagoon #2 & 3 (see Figure B). The wastewater then flows to a chlorination chamber before being de-chlorinated and discharged to the Bouie River via outfall 001.

Page 7 of 19 Project #:11-0592

	ϵ	
·		

Figure Λ – Hattiesburg North WWTP Aerial and Dimensions

				-	
				•	· .
				• .	
		•			
·. •					
	+				
		•			
					•
•					
		·			
				·	
					,
	· ,				
			·		
		·			
	•				
. :					·
			·		· ·
		1			
			•		

2. Permit Review

The NPDES permit became effective on June 7, 2010 and will expire on May 31, 2015. The outfall and the name of the receiving waters were as described in the permit. A copy of the current permit was kept at the operations office off-site. Typically, facilities of this size require composite samples for the major parameters listed in the permit. However, this permit does not require composite sampling for effluent parameters such as BOD₅ and TSS, nor does it stipulate limits for nutrient loadings (see recommendation 9).

3. Records and Reports

Discharge Monitoring Reports (DMRs) and analytical laboratory reports for March - December 2010 and January – May 2011 were checked for agreement with NPDES self-monitoring program requirements regarding sampling documentation, equipment calibration, and reporting of parameter concentrations and loadings. The self-monitoring records were kept for a minimum of three years. The self-monitoring records consisted of the following:

- DMRs
- Analytical data/laboratory reports
- Daily operating logs/sheets
- Bench sheets/calibration records
- · Chain-of-custody forms

4. Flow Measurement

The facility's effluent flow was measured using an inline Doppler flow meter. This flow meter did not have a totalizer but logged reported flow via a computer.

5. Operations & Maintenance

The WWTP was staffed daily by at least one certified operator for approximately 4 hours. Maintenance activities were performed by the operator or by contractors as needed. The operator indicated that the treatment system is short circuiting and that efforts are being made to expand the treatment capacity of the plant.

6. Sludge Disposal

The WWTP does not have sludge handling facilities on site as oxidation lagoons are not generally required to maintain sludge handling facilities. According to the operator, no significant sludge removal from the lagoon has taken place since construction.

7. Facility Sampling

The permittee collected samples according to the sampling frequencies and sample types described in the permit. Effluent grab samples were collected for pH, DO, TRC, NH₃-N, FC, TSS, and BOD₅ analyses.

Page 9 of 19 Project #:11-0592

•	
. 1	
•	
,	
,	

8. Effluent and Receiving Waters

The final effluent had a light green color. However, there were no visible oil sheens or excess foaming observed in the final effluent.

FACILITY/EPA DATA DISCUSSION

EPA Sampling Methodology

Influent wastewater entered the treatment system (see Figure B) via a submerged force-main. Effluent 24-hour time composite samples were collected at outfall 001 using an ISCO (Model 3700) automatic sampler. Samples were collected and analyzed for Total Phosphorus (TP), total Kjeldahl nitrogen (TKN), nitrate/nitrite, BOD₅, TSS, NH₃-N and metals.

Effluent grab samples were also collected from outfall 001 for Fecal Coliform (FC), Dissolved Oxygen (DO), pH and temperature analyses. The samples collected for fecal coliform bacteria were analyzed by MDEQ at EPA's request.

Internal (in-plant) or 'process' grab samples were collected at designated locations (see Figure B) and analyzed for BOD₅ and TSS. Grab samples were also collected upstream and downstream of outfall 001 and analyzed for the same parameters as the plant effluent.

A continuous recording automatic meter capable of reading DO, pH, Temperature, Specific Conductivity and Turbidity at 10 minute intervals, was installed upstream and downstream of outfall 001 and collected data continuously during the 24-hours sampling period.

Table 1.0 summarizes the pertinent information on all grab and composite samples collected during this inspection. This table list the composite sample locations, the equipment used and parameters collected, the aliquot collected, and the frequency of collection for each composite sample during the compositing period.

A time-of-travel study using Rhodamine dye as a tracer was conducted during this inspection (see Attachment 3). The tracer study was used to determine the detention time of the wastewater in the treatment system and to investigate the possibility of short-circuiting of the treatment process. The study was conducted over approximately 20 days.

Page **10** of **19** Project #:11-0592

•
. •
••

Table 1.0 (SESD Sampling Activities)

Hattiesburg North WWTP Hattiesburg, Mississippi

Location	Equipment/Parameters	Aliquot	Frequency
Influent – (collected where pipe enters lagoon – sample A, Figure B)	Grab Sample collected manually. Parameters – Temperature, DO, pH	-	<u>-</u>
Influent – Industrial (collected at Pretreatment discharge)	Grab Sample collected manually. Parameters - BOD ₅ & TSS	•	During discharge
Effluent – 001 (collected after chlorine contact chamber – sample E Figure B)	Composite Samples collected using an ISCO – 3700 portable automatic sampler. Parameters - BOD ₅ , TSS, NH ₃ -N, Nitrate/Nitrite, Total Kjeldahl, Total Phosphorus. Grab samples for fecal coliform.	150 mL	Every 15 minutes over 24 hours
Surface Water – Upstream/ Downstream (collected at pump industrial facility station)	Grab Samples collected manually. Parameters - BOD ₅ , TSS, NH ₃ -N, Nitrate/Nitrite, Total Kjeldahl, Total Phosphorus. Grab samples for fecal coliform.	-	-

Quality Assurance/Quality Control

Two preservative blanks and one equipment rinse blank were collected in 1-liter plastic containers filled with analyte-free water and analyzed for metals and nutrients. The preservative blanks were used to assess possible sample contamination during preservation and transportation of the samples. The equipment blank was used to determine contamination from the equipment used to collect the samples. The analytical results for the preservative blank (HTNR 0001) indicated low level Total Kjeldahl Nitrogen (0.12 mg/L).

MDEQ personnel collected and analyzed samples for fecal coliform bacteria. All samples collected by MDEQ personnel were handled in accordance with the appropriate procedures outlined in the MDEQ's standard operating manual.

All samples collected onsite by EPA personnel remained in the custody of EPA personnel and were transported to the SESD laboratory for analyses. Samples analyzed by SESD personnel were analyzed in accordance with the SESD Analytical Support Branch Laboratory Operations and Quality Assurance Manual, January 6, 2011. EPA sampling methods, field measurements, and calibration procedures were conducted in accordance with the following EPA Region 4 operating procedures:

- i. Field pH Measurement (SESDPROC-100-R2)
- ii. Field Temperature Measurement (SEDPROC-102-R3)
- iii. Field Measurement of Dissolved Oxygen (SEDPROC-106-R2)

Page 11 of 19 Project #:11-0592

		,	
$\mathbf{r}_{i} = \mathbf{r}_{i} + \mathbf{r}_{i}$			
			·
		i .	
	. ^		
			·
		•	
	ζ.		
			•
		•	
			. ,

- iv. Global Positioning System (SEDPROC-110-R3)
- v. In-Situ Water Quality Monitoring (SEDPROC-111-R2)
- vi. Surface Water sampling (SEDPROC-201-R1)
- vii. Wastewater Sampling (SESDPROC-306-R2)
- viii. Dye Tracer Measurements (SESDPROC-514-R0)

Table 2.0 shows a comparison between typical domestic influent wastewater pollutant concentrations and the analytical results obtained during the EPA sampling. The results indicate that higher than typical strength suspended solids wastewater is entering the lagoons from the industrial user. In addition, the table below summarizes the results obtained from samples collected at various internal 'process' locations. The objective of collecting samples at these locations was to track BOD₅ and TSS removal as wastewater progresses through the lagoons to final discharge at outfall 001.

Table 2.0 (Internal Process & Pretreatment Samples) Hattiesburg North WWTP Hattiesburg, Mississippi

		ical Untrea		Influent			Influent Samples		Pretreat
Parameter (mg/L)	Low	Medium	High	Result**	L1 to	L1 to L3	(Dairy)		
BOD₅	110	190	350	289	120A	.58A	140A		
Suspended Solids	120	210	400	216	61	48	470		
Ammonia NH ₃ -N	: 12	25	45	22					
Total Kjeldahl Nitrogen	20	40	70						
Total Phosphorus	4	7	12						

^{* -} Metcalf & Eddy, Wastewater Treatment and Reuse 4th Edition, pg 186

Table 3.0 shows a summary of the facility's self-monitoring data from July 2008 through June 2011. The self-monitoring records showed that numerous exceedences occurred for BOD₅, TSS, TRC, and fecal coliform bacteria during this time period. The data shown was obtained from the EPA data base (PCS).

Page **12** of **19** Project #:11-0592

^{** -} Average results retrieved from EPA database for 1 year (2010 to 2011)

L1 to L2 - Sample taken where wastewater flow from Lagoon #1 to Lagoon #2

L1 to L3 - Sample taken where wastewater flow from Lagoon #1 to Lagoon #3

Pretreat. (Dairy) - Effluent from Dairy Fresh (Borden Dairy) pretreatment WWTP discharge

A - The analyte was analyzed in replicate. Reported value is an average of the replicates

			i,	
	•			
		, , , , , , , , , , , , , , , , , , ,		
	·			
		•	· · · · · · · · · · · · · · · · · · ·	•
·				
·			•	·
	•			
			•	
·				
				,
			·	
		•	•	
				•
	•			•
	•	• ,		
	-			et.
			-	
				·
		.*		
			. •	
	٠.			
		•		
				4.
·				
			· ·	

Table 3.0 (Historical Data Review)

Hattiesburg South WWTP Hattiesburg, Mississippi

Det(c)	,EGDE a	y.(imi./0)	STATE OF THE STATE	rkerioče (in 71) =	Figw	pti	PROPERTY OF THE PROPERTY OF	es(duak e (mg/li)	Fecal 0 (#/10	oliform Omb)
	Avesto	Maxeas	S RESIDENCE DICH	Maxiga	(mgd)		网络我们的现在分	Max _{-0.52}	A Valid and a value of the Anna Contract of the Ann	Max
31-Jul-08	18	18	19	19	1.22	6.88	0.32	0.38	70	70
31-Aug-08	14	14	10	10	1.49	6.91	0.31	0.37	40	40
30-Sep-08	· 4	4	14	14	1.63	6.87	0.28	0.33	230	230
31-Oct-08	15	15	14	14	1.26	7.15	0.3	0.35	. 800	800
30-Nov-08	6*	6*	17*	17*	1.35	6.7	0.3	0.34		
31-Dec-08	7*	7*	15*	15*	1.65	6.95	0.29	0.34		
31-Jan-09	7*	7*	10*	10*	1.65	6.98	0.29	0.42	128	16000
28-Feb-09	9*	9*	23*	23*	1.54	6.92	0.29	0.32		
31-Mar-09	36*	36*	29*	29*	1.88	6.07	0.24	0.35	2800	2800
30-Apr-09	6*	6*	28.5*	28.5*	1.34	6.74	0.13	0.19		
31-May-09	6*	6*	32.5*	32.5*	1.14	7.11	0.22	0.28		
30-Jun-09	12*	12*	15*	15*	1.88	7.2	0.19	0.29	20	20
31-Jul-09	8*	8*	41*	41*	0.21	6.76	0.13	0.15	40	40
31-Aug-09	11*	11*	12*	12*	2.03	6.54	0.12	0.15		
30-Sep-09	6*	6*	14*	14*	2.03	7.25	0.12	0.15	20	20
31-Oct-09	7*	7*	21*	21*	2.13	7.46	0.13	0.13	525	16000
30-Nov-09	13*	13*	22*	22*	1.88	7.4	0.12	0.14	20	20
31-Dec-09	42.5*	57*	14*	14*	2.65	7.39	0.12	0.13	170	170
31-Jan-10	41.1	132	26	26	1.41	7.79	0.12	0.13		
28-Feb-10	27	39	30	35	2.71	7.85	0.11	0.11		
31-Mar-10	26	26	48.3	76	2.25	6.98	0.1	0.12	40	40
30-Apr-10	22	49	30	44	2.25	7.5	0.1	0.12		
31-May-10	10	10	28	28	2.17	7.04	0.13	0.15	193	1700
30-Jun-10	15	15	25	25	2.2	7.06	0.15	0.2	22	500
31-Jul-10	5	5	28	28	2.05	7.4	0.19	0.23**	110	110
31-Aug-10	6	6	27	27	0.22	7.28	0.19	0.22**		
30-Sep-10	5	5	28	28	1.93	7.38	0.14	0.2**	15	230
31-Oct-10	8	8	35	35	2	7.4	0.13	0.13**	176	1700
30-Nov-10	11	11	34.2	40	1.92	7.21	0.13	0.19**	40	40
31-Dec-10	28.5	48	46.7	53	1.96	7.02	0.1	0.14**		
31-Jan-11	42	42	42	42	2.2	7.1	0.11	0.13**	11500	16000
28-Feb-11	22	22	60	60	2.26	6.76	0.4	0.8**	126	16000
31-Mar-11	18	18	3 2	40	2.5	7.09	0.5	0.9**		
30-Apr-11	28	28	36	36	2.7	7.24	0.2	0.2**	40	40
31-May-11	27	27	29	29	3.3	7.06	0.2	0.3**	20	20
30-Jun-11	25	32	40	49	3.4	7.63	0.2	0.3**	155	300

^{* -} BOD limit Avg. = 50; Max. = 65

! Fecal Coli. limit seasonal (May - Oct.) Avg. = 200, Max. = 400; (Nov. - Apr.) Avg. = 2,000, Max. = 4,000 Permit limit exceedence show in bold red

Page **13** of **19** Project #:11-0592

^{** -} TRC limit Max. = 0.60

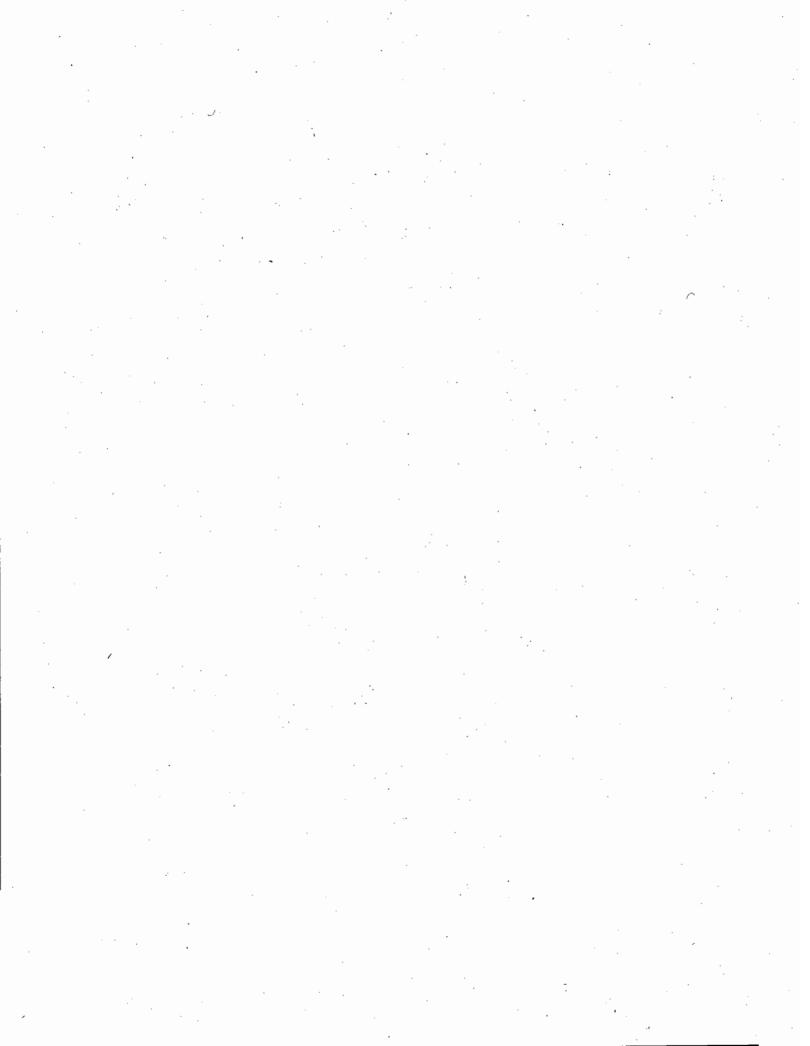


Table 4.0 displays the current permit limits and summarizes the analytical results obtained by the SESD and MDEQ laboratories. The permit became effective on June 07, 2010 and will expire on May 31, 2015. Surface water sampling results are also shown in table 4.0 for comparison with the outfall results. At the time of this inspection, the analytical results indicate that the Bouie River had better water quality values than the effluent from the WWTP for all parameters except fecal coliform bacteria and suspended solids.

The analytical results obtained from the EPA sampling of the Hattiesburg North WWTP did not show any parameter exceeding the NPDES permit limits. The effluent from the Hattiesburg North WWTP was also analyzed for priority pollutant metals (see Attachment 2). The highest metal concentrations reported were from Calcium, Magnesium, Potassium and Sodium. No mercury was detected.

The results obtained from the dye study (see Attachment 3) at the Hattiesburg North WWTP confirmed that short-circuiting takes place in the treatment system. Short-circuiting reduces the amount of time the influent wastewater stays in the treatment system and therefore negatively impacts effluent quality. An estimated detention time of 8.1 days was obtained from the data. This result was in accordance with the calculated detention time at average flow of 7.7 days (see Attachment 4). However, the calculated value indicates that the WWTP was also organically overloaded and therefore unlikely to consistently produce an effluent quality that meets NPDES permit limits.

Page **14** of **19** Project #:11-0592

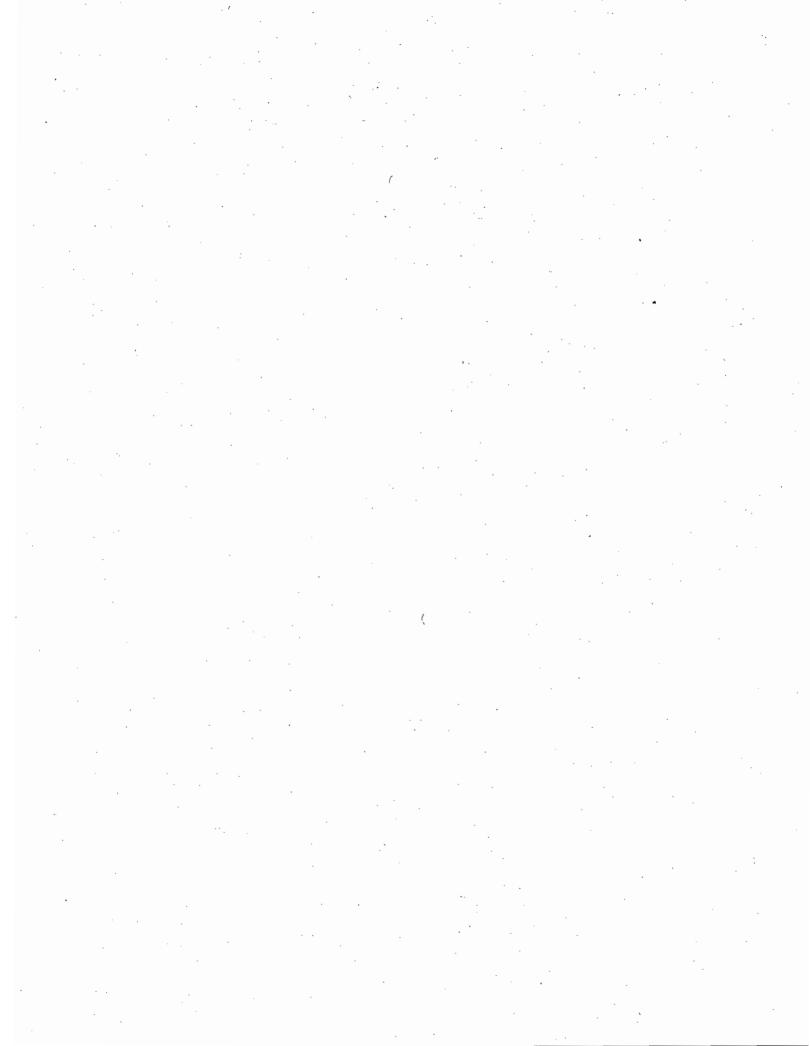


Table 4.0 (Summary of SESD Analytical Results) Hattiesburg North WWTP Hattiesburg, Mississippi

Parameter	Monthly Avg.	Weekly Max.	Monitoring Frequency	Surface Water Upstream	Surface Water Downstream	Effluent Results
Flow (MGD)	4	Report	3 Times/Week			2.4**
BOD, 5-day (mg/L)	30	45	Monthly	4.0K	4.0K	14
Suspended Solids (mg/L)	30	45	Monthly	33	36	24
Ammonia NH ₃ -N (mg/L)	Report	oort	Quarterly	0.081	0.08	-12
Total Nitrogen (mg/L)	Report	ort	Quarterly	1.36	1.22	14.8
Total Phosphorus (mg/L)	Report	ort	Quarterly	0.2	0.18	11
pH (Standard Units)	0.6 – 0.9	9.0	Monthly	6.1	9.9	7.49
TRC (mg/L)	0.35	9.0	3 Times/Week		-	
Fecal Coliform (Col/100 mL)*	200	400	Monthly	3,000	300	<20
Non-Permitted Parameters						
Temperature (C)				26.1	25.9	34
Dissolved Oxygen (mg/L)			ŧ	7.0	6.8	5.7
Nitrate/Nitrite (mg/L)	1	 -	l'.	9.0	0.57	0.81
TKN (mg/L)				0.76J, QM2	0.65	14

^{* -} Seasonal Limitations (May-Oct permit limits). Result provided by MDEQ Laboratory

** - Value obtained from plant flow meter

! - Surface Water samples are collected as grabs

J - The identification of the analyte is acceptable; reported value is an estimate.

K - The identification of the analyte is acceptable; reported value may be biased high. The actual value is expected to be less than the reported value

QM2 - Matrix Spike recovery greater than method control limits.

·
•
q
•

CONCLUSIONS

The findings observed during the CSI and the analytical results obtained from the samples collected indicate that non-compliance at the Hattiesburg North WWTP generally stems from a combination of four factors:

- 1. Organic loading The Hattiesburg North WWTP receives medium to high strength wastewater. This influent wastewater is applied over a small area and therefore the typical organic loading rates for lagoons are exceeded (see Attachment 4). Organic overloading reduces the overall treatment effectiveness of the plant and creates several issues such as reduced dissolved oxygen levels and the production and release of noxious odor compounds. In addition, organic overloading can become toxic to the bacteria necessary for treatment in natural systems which can lead to insufficient organic matter conversion. Excess organic loading promotes the buildup of solids in the lagoon. Solids build up in the lagoon reduces the overall detention time of the wastewater in the treatment process, and as a result, an effluent of lesser quality is produced.
- 2. Design A thorough engineering study of the limitations of the current treatment system and an analysis of the available wastewater treatment technologies would be beneficial to the City of Hattiesburg. A key element to be considered in such a study is whether a redesigned natural system (lagoons) or a more mechanically intensive treatment option is best suited for this plant. The WWTP as it is currently configured could improve in overall treatment performance by reducing short-circuiting and adding a nutrient removal component to the plant. As illustrated by Figure B, a very large portion of lagoon #2 is not being utilized for wastewater processing. This loss in area usually translates to a reduction in effluent quality. Generally, when using natural systems such as lagoons to treat wastewater similar in characteristics to that of Hattiesburg North, a design that distributes the influent wastewater to several small lagoons or utilizes multiple inlets produces better quality effluent. It is also preferred to use a configuration that includes several separate treatment trains operating in parallel, with each treatment train comprising multiple lagoons operated in series.
- 3. Aeration Several aerators were in use in the lagoons at the time of the inspection. However, most are located at the edge of the lagoon embankment and do not effectively deliver oxygen to the entire lagoon. Adequate aeration and mixing is required to supply the oxygen bacteria need to grow and convert organic matter as well as to suppress unpleasant odors. Proper aerator placement also assists in directing the flow of wastewater around the lagoon and thereby reducing the possibility of short-circuiting. Water will find the shortest and easier path through the treatment system. Therefore, any improvement that minimizes short-circuiting will improve effluent quality.
- 4. Pretreatment Regardless of the design or type of treatment facility used, a rigorous pretreatment program is essential to consistently meeting NPDES permit requirements.

Page **16** of **19** Project #:11-0592

	,			
			•	
				• •
	8			
				. · .
		•		

This is particularly important when dealing with high strength wastewater. Wastewater from Dairy industries can be difficult to treat and therefore require close monitoring. A pretreatment program that sets loading limits and monitors industrial users would assist the operators of the treatment plant in consistently meeting effluent permit limts.

Page 17 of 19 Project #:11-0592

	4.4			
			*	
•			•	
•		• .		
			•	
		•		
·				
		•		
· ·				
•				
•				
			•	•
		·		
	•	ί.		
				•
	•			•
: :	•	*		
	•			
			•	
				_
		•		
·				•
	•			
			•	
,				
	/ .			. •
· · · · ·			•	
		· · · · · · · · · · · · · · · · · · ·		
			•	
			•	
			•	**
		•	,	
·				
	,			*
•				
	1			
		* .		
	2 2			

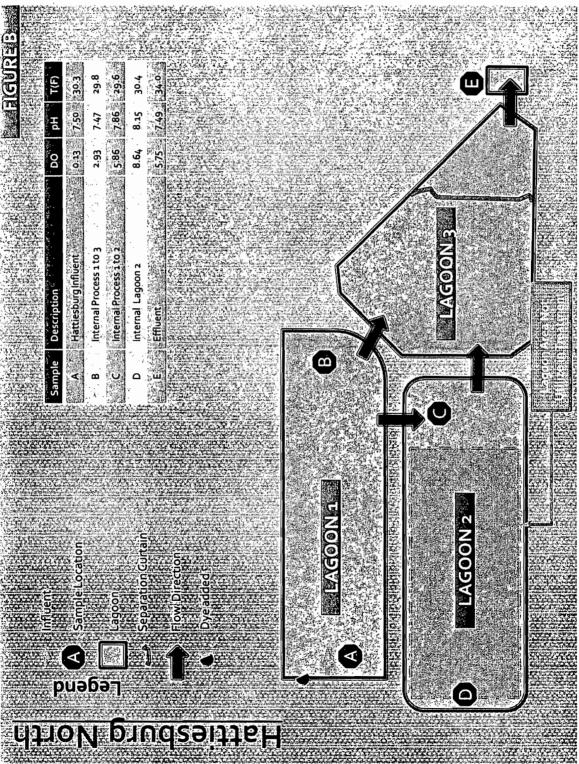


Figure B - Hattiesburg North Sample locations and treatment system layout.

·	
·	
	\cdot
· .	
¥ .	
	·

REFERENCES

- 1. Wastewater Engineering: Treatment and Reuse, 4th Edition, Metcalf and Eddy, 2003
- 2. Environmental Reference Manual, 2nd Edition, Michael R. Lindeburg, 2003
- 3. USDI Water Measurement Manual, 3rd Edition, 2001
- 4. USEPA Process Control Workbook
- 5. USEPA Operations of Wastewater Treatment Plants

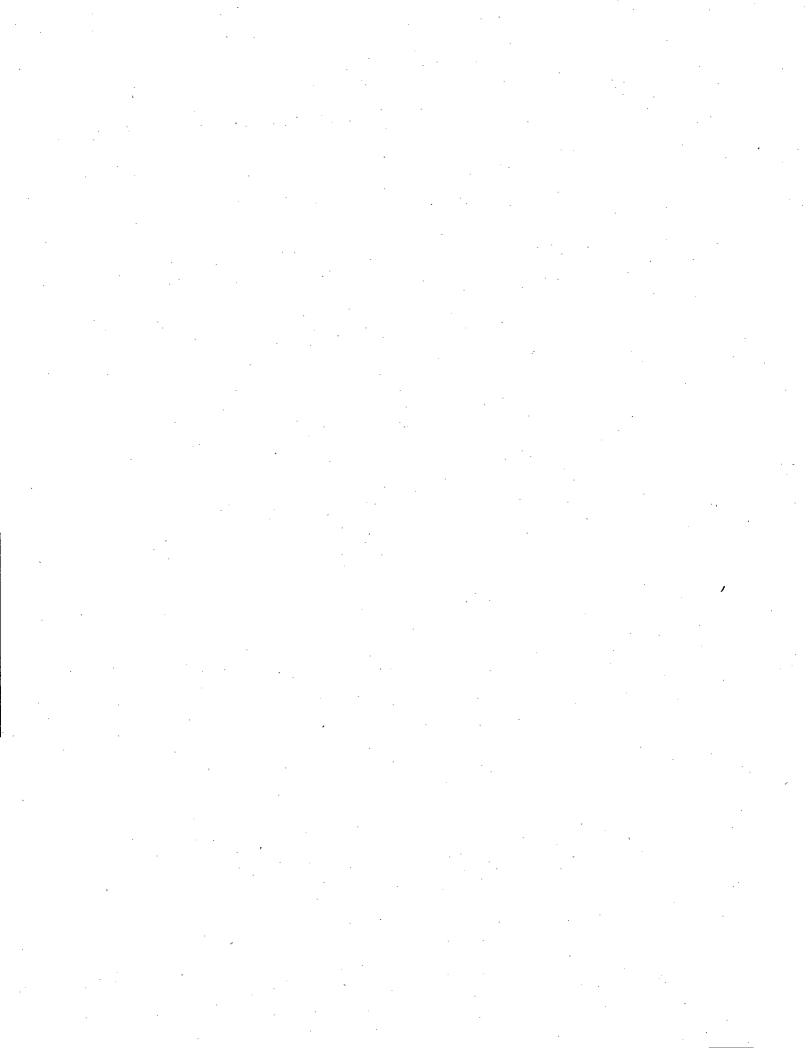
ATTACHMENTS

- 1. Photo log (1 Page)
- 2. SESD Analytical Results Report (39 Pages)
- 3. Hattiesburg Wastewater Treatment Plant Time-of Travel Study (14 Pages)
- 4. Process Calculations (3 Pages)

END OF REPORT

Page 19 of 19

Project #:11-0592



Hattiesburg North WWTP Photo Log



Above: Photo 806 – Outlet of pipe connecting lagoon #1 to #2 (foreground). Lagoon #2 outlet to Lagoon #3 structure (background).



Above: Photo 807 – Inlet of pipe connecting lagoon #1 to #2 (foreground). Aerator and Lagoon #1 outlet to Lagoon #3 structure (background). Photographs were taken by Richard Elliott and Cornell Gayle during site visit on July 25 – 29, 2011.

				•	
					•
				,	
				•	
	•				
•				:	
				•	
•					
		,			
¥					
*				1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
		•		• • • •	
•				•	•
		•			
	•	4.			
			·	•	•
•					
	•				
		•		•	
			. :	•	
•					
	•				
				•	
•				•	
	•	• •		•	•
		1 .			
				•	,
				·	
•			•	•	
					•
	•				
		,			
		•			
	•				
	•				
	to a contract of the contract				
•			* *		
	·				



Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

September 8, 2011

4SESD-ASB

MEMORANDUM

SUBJECT:

FINAL Analytical Report

Project: 11-0592, Hattiesburg North Lagoon CSI

Compliance Monitoring

FROM:

Jenny Scifres

ASB Inorganic Chemistry Section Chief

THRU:

Gary Bennett, Chief

Analytical Support Branch

TO:

Richard Elliott

Attached are the final results for the analytical groups listed below. These analyses were performed in accordance with the Analytical Support Branch's (ASB) Laboratory Operations and Quality Assurance Manual (ASB LOQAM) found at www.epa.gov/region4/sesd/asbsop. Any unique project data quality objectives specified in writing by the data requestor have also been incorporated into the data unless otherwise noted in the Report Narrative. Chemistry data have been verified based on the ASB LOQAM specifications and may have been qualified if the applicable quality control criteria were not met. For a listing of specific data qualifiers and explanations, please refer to the Data Qualifier Definitions included in this report. The reported results are accurate within the limits of the method(s) and are representative only of the samples as received by the laboratory.

Analyses Included in this report:

Method Used:

Classical/Nutrient Analyses (CNA)	
Ammonia/TKN	EPA 350.1
Ammonia/TKN	EPA 351.2
Demand	SM 5210B
Nitrate and/or Nitrite	EPA 353.2
Phosphorous	EPA 365.1
Solids	SM 2540D

· · · · · · · · · · · · · · · · · · ·				,
(·		
	•	. •		
,	•			
,				
·				•
		,	, .	
	·			
•				
	•			
		•		
•			•	
`			j	•
		•		
•	•			
,				
·' .			•	
		•		
•		•		
			•	
			·	
				•
		•	•	
,				
Company of the second second		• • • • • • • • • • • • • • • • • • • •		·
•		,		
		•		•
· ·				
				·
÷				



Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

SAMPLES INCLUDED IN THIS REPORT

Project: 11-0592, Hattiesburg North Lagoon CSI

Sample ID	Laboratory ID	Matrix	Date Collected	Date Received
HTNR-0001	E113109-01	Preservative Blank	7/27/11 21:19	7/29/11 9:01
HTNR-0016	E113109-04	Surface Water	7/27/11 10:45	7/29/11 9:01
HTNR-0017	E113109-05	Surface Water	7/27/11 10:45	7/29/11 9:01
HTNR-0014	E113109-07	Wastewater	7/27/11 15:16	7/29/11 9:01
HTNR-0024	E113109-08	Wastewater	7/27/11 15:16	7/29/11 9:01
HTNR-0021	E113109-09	Wastewater	7/27/11 13:55	7/29/11 9:01
HTNR-0007	E113109-10	Wastewater	7/27/11 16:08	7/29/11 9:01
HTNR-0015	E113109-11	Surface Water	7/27/11 -10:30	7/29/11 9:01
HTNR-0018	E113109-12	Surface Water	7/27/11 10:30	7/29/11 9:01
HTNR-0025	E113109-13	Wastewater	7/27/11 13:50	7/29/11 9:01

Page 3 of 21 E113109 CNA FINAL 9/8/11 16:31

	•
	•
	·
	• •
•	
	· · · · · · · · · · · · · · · · · · ·
	,



Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Classical/Nutrient Analyses

Project: 11-0592, Hattiesburg North Lagoon CSI

Sample ID: HTNR-0001

Station ID:

Lab ID: E113109-01

Matrix: Preservative Blank

Date Collected: 7/27/11 21:19

CAS Number	Analyte	Results Qualifiers	Units	MRL	Prepared	Analyzed	"Method
7664-41-7 E17148461	Ammonia as N Total Kjeldahl Nitrogen	0.050 U 0.12 J, QR-1	/mg/L mg/L	0.050 0.050	8/09/11 9:28 8/10/11 12:16	8/11/11 14:43 8/10/11 12:16	EPA 350.1 EPA 351.2
E701177	Nitrate/Nitrite as N	0.050 U	mg/L	0.050	8/24/11 20 01	8/24/11 20 01	EPA 353.2
7723-14-0	Total Phosphorus	0.010 U, J, QR-1	mg/L	0.010	8/12/11 8:45	8/15/11 14:14	EPA 365.1

Page 5 of 21 E113109 CNA FINAL 9/8/11 16:31





Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Classical/Nutrient Analyses

Project: 11-0592, Hattiesburg North Lagoon CSI

Sample ID: HTNR-0017

Lab ID: E113109-05

Station ID: DNSTRM

Matrix: Surface Water

Date Collected: 7/27/11 10:45

CAS Number	Analyte	Results' Qualifiers	Units	MRL	Prepared	Analyzed	Method
7664-41-7 E17148461	Ammonia as N Total Kjeldahl Nitrogen	0.080	mg/L mg/L	0.050 0.050	8/09/11 4 79:28 8/10/11 12:16	8/11/11 14:43 8/10/11 12:16	EPA 350.1 EPA 351.2
E701177	Nitrate/Nitrite as N	0.57	mg/L	0.050	8/24/11 20:01	8/24/11 20:01	EPA 353.2
7723-14-0	Total Phosphorus	0.18	mg/L	0.010	8/12/11 8:45	8/15/11 14:14	EPA 365.1

Page 7 of 21 E113109 CNA FINAL 9/8/11 16:31





Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Classical/Nutrient Analyses

Project: 11-0592, Hattiesburg North Lagoon CSI

Sample ID: HTNR-0024

Lab ID: E113109-08

Station ID: EFF001

Matrix: Wastewater

Date Collected: 7/27/11 15:16

CAS	Analyte	Results: Qualifiers	Units	MRL	Prepared	Analyzed	Method
E1640606	BOD S Day	14	/ mg/L	2.0	7/29/11 12:58	7/29/11 - 12:58	
E1642818	Total Suspended Solids	24	mg/L	4.0	8/03/11 21:10	8/03/11 21:10	SM 2540D

					,
				• •	
		•			
•					
					•
1					
	,				
		·			
				•	•
		,			
•					
					:
		•			
		•			
	•		· .	•	
					•
•	1				
	•				
•					
				•	
				•	
			•		



Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Classical/Nutrient Analyses

Project: 11-0592, Hattiesburg North Lagoon CSI

Sample ID: HTNR-0007

Lab ID: E113109-10

Station ID: PRETRT

Matrix: Wastewater

Date Collected: 7/27/11 16:08

CAS Number	Analyte	Results Qualifiers	Ünits	MRE	Prepared	Analyzed	Method
E1640606	BOD: S Day	\$140:A	i mg/L	2.0	7/29/11 A	7/7/29/11 / 5/13:33	SM 5210B
E1642818	Total Suspended Solids	470	mg/L	4.0	8/03/11 21:10	8/03/11 21:10	SM 2540D

Page 11 of 21 E113109 CNA FINAL 9/8/11 16:31

•	
•	
•	



Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Classical/Nutrient Analyses

Project: 11-0592, Hattiesburg North Lagoon CSI

Sample ID: <u>HTNR-0018</u> Station ID: <u>UPSTRM</u> Lab ID: E113109-12

Matrix: Surface Water

Date Collected: 7/27/11 10:30

CAS Number 1	Analyte	Results Qualifiers	Units	MRL	Prepared*	Analyzed	Method
7664-41-7. E17148461	Ammonia as N Total Kjeldahl Nitrogen	0.081 0.76 J, QM-2	mg/L mg/L	0.050	8/09/11 9:28: 8/10/11 12:16	8/11/11 114/43 8/10/11 12:16	EPA 350 I EPA 351.2
E701177	Nitrate/Nitrite as N	0.60	mg/L	0.050	8/24/11 20:01	8/24/11 - 20:01	EPA 353.2
7723-14-0	Total Phosphorus	0.20	mg/L	0.010	8/12/11 8:45	8/15/11 14:14	EPA 365.1

9/8/11 16:31

			•			. (,
				4		
				•	•	
	•					
·		,				
		•				
			•	•		
	• .					
	C .		•			
			. ,		• .	
						•
				•		
						,
		•				
					•	•
						•
		¥.			·	
`. 						
				1	•	
					•	



Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Classical/Nutrient Analyses (CNA) - Quality Control US-EPA, Region 4, SESD

	_	Reporting		Spike	Source		%REC	_	RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1108014 - C 2540 Solids									·	
Blank (1108014-BLK1)				Prepared &	Analyzed:	08/03/11			<u> </u>	
SM 2540D										
Total Suspended Solids	U	, 4.0	mg/L							
LCS (1108014-BS1)		•		Prepared &	Analyzed:	08/03/11	٠.			
SM 2540D										_
Total Suspended Solids	98.800	4.0	mg/L	96.600		102	83-109			
CC D (1109014 BCD1)	•			D 0-	A l 4.	00/02/11				
LCS Dup (1108014-BSD1)				Prepared &	Analyzed	08/03/11				
SM 2540D Fotal Suspended Solids	97.600	4.0	mg/L	96.600		101	83-109	1.22	10	
		4,5		, 5.000			05 107	1.22		
									• •	
Duplicate (1108014-DUP1)	So	urce: E113108-	23	Prepared &	Analyzed:	08/03/11				
SM 2540D										
Total Suspended Solids	26.800	4.0	mg/L		26.100			2.65	10 .	
						,	٠.			
Duplicate (1108014-DUP2)	So	urce: E113109-	13	Prepared &	Analyzed:	08/03/11				
SM 2540D										
Total Suspended Solids	61.200	4.0	mg/L		60.600			0.985	10	•
					٠.					
MRL Verification (1108014-PS1)				Prepared &	Analyzed:	08/03/11				
SM 2540D				- repared a	rthary zea.			_		
Total Suspended Solids	3.3000	4.0	mg/L	4.8300		68.3	63-129			MRL-2
•										
Batch 1108028 - C SM5210 BOD										
Blank (1108028-BLK1)				Prepared &	Analyzed	07/29/11				
SM 5210B				p	,					
BOD, 5 Day	U	2.0	mg/L							
1 CC (1109039 BC1)				D 1.5						
LCS (1108028-BS1)		<u>.</u>		Prepared &	Analyzed:	07/29/11				
SM 5210B	196.00	3.0		105.00		101	70 122			
BOD, 5 Day	190.00	2.0	mg/L	195.00		101	79-133			
I CS Dun (1108028-RSD1)				Prepared 9	Analyzad.	07/29/11				
LCS Dup (1108028-BSD1)				Prepared &	Analyzed:	07/29/11				
LCS Dup (1108028-BSD1) SM 5210B BOD, 5 Day	198.50	2.0	mg/L	Prepared &	Analyzed:	07/29/11	79-133	1.27	. 10	

Page 15 of 21 E113109 CNA FINAL

9/8/11 16:31

	<i>*</i>			•
			\cdot	
	•		•	
				•
•				
			•	
				·
			•	
		5		
	•			
	·			
,				
			•	
			. '	
		. •		
			•	
				•
			,	•
	•			
* *				
				· ·
			•	•
		•		•
		•		•
•				



Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Classical/Nutrient Analyses (CNA) - Quality Control US-EPA, Region 4, SESD

Matrix Spike (1108052-MS2) Source: E113109-12RE1 Prepared & Analyzed: 08/10/11 EPA 351.2 Total Kjeldahl Nitrogen 1.9853 0.050 mg/L 1.0000 0.75760 123 90-110 Q Matrix Spike Dup (1108052-MSD1) Source: E113108-24RE1 Prepared & Analyzed: 08/10/11 Prepared & Analyzed: 08/10/11 90-110 7.17 20 Matrix Spike Dup (1108052-MSD2) Source: E113109-12RE1 Prepared & Analyzed: 08/10/11 90-110 7.17 20 Matrix Spike Dup (1108052-MSD2) Source: E113109-12RE1 Prepared & Analyzed: 08/10/11 90-110 3.07 20 Q MRL Verification (1108052-PS1) Prepared & Analyzed: 08/10/11 Prepared & Analyzed: 08/10/11 BPA 351.2 NR Prepared & Analyzed: 08/10/11 NR	Analyte	Result	Reporting Limit	Units	Spike Level	- Source Result	%REC	%REC Limits	.J RPD	RPD Limit	Notes
Prepared : 08/09/11 Analyzed: 08/10/11	Batch 1108043 - C 350.1 Ammonia										
Blank (1108052-BLK1)	MRL Verification (1108043-PS1)	· · · · · · · · · · · · · · · · · · ·			Prepared: 0	08/09/11_A	nalyzed: 08	/11/11			
Blank (1108052-BLK1)					,						
Description	Batch 1108052 - C 351.2 TKN		_					·			_
Description Description	Blank (1108052-BLK1)		· .		Prepared &	Analyzed:	08/10/11				
Prepared & Analyzed: 08/10/11		U	0.050	mg/L							t
Prepared & Analyzed: 08/10/11	LCS (1108052-BS1)				Prepared &	: Analyzed:	08/10/11				
Prepared & Analyzed: 08/10/11						,					
EPA 351.2	Total Kjeldahl Nitrogen	2.3735	0.050	mg/L	2.3400		101	90-110		1	
EPA 351.2	LCC D (1100073 BCD1)	•			D 4.0	4 1 1	00/10/11				
Total Kjeldahl Nitrogen 2.3686 0.050 mg/L 2.3400 101 90-110 0.207 15					Prepared &	Analyzed:	08/10/11		· · ·		
Total Kjeldahl Nitrogen 1.5485 0.050 mg/L 1.0000 0.69440 85.4 90-110 Q		2.3686	0.050	mg/L	2.3400		101	90-110	0.207	15	
EPA 351.2											
Total Kjeldahl Nitrogen	Matrix Spike (1108052-MS1)	Sour	rce: E113108-	24RE1	Prepared &	Analyzed:	08/10/11				
Matrix Spike (1108052-MS2) EPA 351.2 Total Kjeldahl Nitrogen 1.9853 0.050 mg/L 1.0000 0.75760 123 90-110 Q Matrix Spike Dup (1108052-MSD1) EPA 351.2 Total Kjeldahl Nitrogen 1.6120 0.050 mg/L 1.0000 0.69440 91.8 90-110 7.17 20 Matrix Spike Dup (1108052-MSD2) Source: E113109-12RE1 Prepared & Analyzed: 08/10/11 EPA 351.2 Total Kjeldahl Nitrogen 1.9482 0.050 mg/L 1.0000 0.75760 119 90-110 3.07 20 Q MRL Verification (1108052-PS1) Prepared & Analyzed: 08/10/11 EPA 351.2 Total Kjeldahl Nitrogen 0.029300 0.050 mg/L 0.050000 58.6 70-130 MR									_		
EPA 351.2 Total Kjeldahl Nitrogen 1.9853 0.050 mg/L 1.0000 0.75760 123 90-110 Q Matrix Spike Dup (1108052-MSD1) Source: E113108-24RE1 Prepared & Analyzed: 08/10/11 EPA 351.2 Total Kjeldahl Nitrogen 1.6120 0.050 mg/L 1.0000 0.69440 91.8 90-110 7.17 20 Matrix Spike Dup (1108052-MSD2) Source: E113109-12RE1 Prepared & Analyzed: 08/10/11 EPA 351.2 Total Kjeldahl Nitrogen 1.9482 0.050 mg/L 1.0000 0.75760 19 90-110 3.07 20 Q MRL Verification (1108052-PS1) Prepared & Analyzed: 08/10/11 EPA 351.2 Total Kjeldahl Nitrogen 0.029300 0.050 mg/L 0.050000 58.6 70-130 MR	Total Kjeldahl Nitrogen	1.5485	0.050	mg/L	1.0000	0.69440	85.4	90-110			· QM-1
EPA 351.2 Total Kjeldahl Nitrogen 1.9853 0.050 mg/L 1.0000 0.75760 123 90-110 Q Matrix Spike Dup (1108052-MSD1) Source: E113108-24RE1 Prepared & Analyzed: 08/10/11 EPA 351.2 Total Kjeldahl Nitrogen 1.6120 0.050 mg/L 1.0000 0.69440 91.8 90-110 7.17 20 Matrix Spike Dup (1108052-MSD2) Source: E113109-12RE1 Prepared & Analyzed: 08/10/11 EPA 351.2 Total Kjeldahl Nitrogen 1.9482 0.050 mg/L 1.0000 0.75760 119 90-110 3.07 20 Q MRL Verification (1108052-PS1) Prepared & Analyzed: 08/10/11 EPA 351.2 Total Kjeldahl Nitrogen 0.029300 0.050 mg/L 0.050000 58.6 70-130 MR						1					
Total Kjeldahl Nitrogen 1.9853 0.050 mg/L 1.0000 0.75760 123 90-110 Q Matrix Spike Dup (1108052-MSD1) Source: E113108-24RE1 Prepared & Analyzed: 08/10/11 EPA 351.2 Total Kjeldahl Nitrogen 1.6120 0.050 mg/L 1.0000 0.69440 91.8 90-110 7.17 20 Matrix Spike Dup (1108052-MSD2) Source: E113109-12RE1 Prepared & Analyzed: 08/10/11 EPA 351.2 Total Kjeldahl Nitrogen 1.9482 0.050 mg/L 1.0000 0.75760 119 90-110 3.07 20 Q MRL Verification (1108052-PS1) Prepared & Analyzed: 08/10/11 EPA 351.2 Total Kjeldahl Nitrogen 0.029300 0.050 mg/L 0.050000 58.6 70-130 MR	Matrix Spike (1108052-MS2)	Sour	rce: E113109-	12RE1	Prepared &	: Analyzed:	08/10/11			·	
EPA 351.2 Total Kjeldahi Nitrogen 1.6120 0.050 mg/L 1.0000 0.69440 91.8 90-110 7.17 20 Matrix Spike Dup (1108052-MSD2) Source: E113109-I2RE1 Prepared & Analyzed: 08/10/11 EPA 351.2 Total Kjeldahi Nitrogen 1.9482 0.050 mg/L 1.0000 0.75760 119 90-110 3.07 20 Q MRL Verification (1108052-PS1) Prepared & Analyzed: 08/10/11 EPA 351.2 Total Kjeldahl Nitrogen 0.029300 0.050 mg/L 0.050000 58.6 70-130 MR		1.9853	0,050	mg/L	1.0000	0.75760	123	90-110			QM-2
EPA 351.2 Total Kjeldahi Nitrogen 1.6120 0.050 mg/L 1.0000 0.69440 91.8 90-110 7.17 20 Matrix Spike Dup (1108052-MSD2) Source: E113109-I2RE1 Prepared & Analyzed: 08/10/11 EPA 351.2 Total Kjeldahi Nitrogen 1.9482 0.050 mg/L 1.0000 0.75760 119 90-110 3.07 20 Q MRL Verification (1108052-PS1) Prepared & Analyzed: 08/10/11 EPA 351.2 Total Kjeldahl Nitrogen 0.029300 0.050 mg/L 0.050000 58.6 70-130 MR											
Total Kjeldahl Nitrogen 1.6120 0.050 mg/L 1.0000 0.69440 91.8 90-110 7.17 20 Matrix Spike Dup (1108052-MSD2) Source: E113109-12RE1 Prepared & Analyzed: 08/10/11 EPA 351.2 Total Kjeldahl Nitrogen 1.9482 0.050 mg/L 1.0000 0.75760 119 90-110 3.07 20 Q MRL Verification (1108052-PS1) Prepared & Analyzed: 08/10/11 EPA 351.2 Total Kjeldahl Nitrogen 0.029300 0.050 mg/L 0.050000 58.6 70-130 MR	Matrix Spike Dup (1108052-MSD1)	Sour	rce: E113108-	24RE1	Prepared &	: Analyzed:	08/10/11				
Matrix Spike Dup (1108052-MSD2) EPA 351.2 Total Kjeldahl Nitrogen 1.9482 0.050 mg/L 1.0000 0.75760 119 90-110 3.07 20 Q MRL Verification (1108052-PS1) Prepared & Analyzed: 08/10/11 EPA 351.2 Total Kjeldahl Nitrogen 0.029300 0.050 mg/L 0.050000 58.6 70-130 MR	EPA 351.2				_						
EPA 351.2 Total Kjeldahl Nitrogen 1.9482 0.050 mg/L 1.0000 0.75760 119 90-110 3.07 20 Q MRL Verification (1108052-PS1) Prepared & Analyzed: 08/10/11 EPA 351.2 Total Kjeldahl Nitrogen 0.029300 0.050 mg/L 0.050000 58.6 70-130 MR	Total Kjeldahi Nitrogen	1.6120	0.050	mg/L	1.0000	0.69440	91.8	90-110	7.17	20	
EPA 351.2 Total Kjeldahl Nitrogen 1.9482 0.050 mg/L 1.0000 0.75760 119 90-110 3.07 20 Q MRL Verification (1108052-PS1) Prepared & Analyzed: 08/10/11 EPA 351.2 Total Kjeldahl Nitrogen 0.029300 0.050 mg/L 0.050000 58.6 70-130 MR	Matrix Spika Dun (1108052 MSD2)		. F113100	(2DE1	. Desposed &	A molumed	09/10/11	,			
Total Kjeldahl Nitrogen 1.9482 0.050 mg/L 1.0000 0.75760 119 90-110 3.07 20 Q MRL Verification (1108052-PS1) Prepared & Analyzed: 08/10/11 EPA 351.2 Total Kjeldahl Nitrogen 0.029300 0.050 mg/L 0.050000 58.6 70-130 MR			CC. E113107-	IZREI	riepaied &	Aimiy Zeu.	08/10/11		_		
EPA 351.2 Total Kjeldahl Nitrogen 0.029300 0.050 mg/L 0.050000 58.6 70-130 MR		1.9482	0.050	mg/L	1.0000	0.75760	119 .	90-110	3.07	20	QM-2
EPA 351.2 Total Kjeldahl Nitrogen 0.029300 0.050 mg/L 0.050000 58.6 70-130 MR	MDI Varification (1109052 DS1)				. Dear J o	A mal 4	09/10/11				
Total Kjeldahl Nitrogen 0.029300 0.050 mg/L 0.050000 58.6 70-130 MR					гтерагеа &	Anaiyzed:	08/10/11			•	
· \ \OD		0.029300	0.050	mg/L	0.050000		58.6	70-130			MRL-2, QR-1, U

Page 17 of 21

		•					
			,				
•							•
	•		* g				•
·					•		
•	•		•				
	•						
•		: ,			•	•	
		•					
• •			•				
				•			
						•	
	·			•			
·		,					
•	•						
•			4			•	
• .		•			•		
	•						
	·			•			
	•	•			•	•	
•		,			•		
A							
	•					ı	
						•	
•	• .						
						; .	
·							
	•						
		•					
				•			
			1			•	
	•	•					
				•			
	•						
	•.					. v	,
*				•			
	•		• •	-			
					•	*	
	:						
			•		•		
				*			
	•						
			,			-	
			r			•	
		•					
·							



Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Classical/Nutrient Analyses (CNA) - Quality Control US-EPA, Region 4, SESD

Analyte	Result	Reporting Limit Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1108061 - C 365.1 TPhos		·							
Matrix Spike (1108061-MS4)	Sour	ce: E113109-12	Prepared: (08/12/11 Ar	alyzed: 08	/15/11			
EPA 365.1 Total Phosphorus	0.68670	0.010 mg/L	0.50000	0.20450	96.4	90-110			:, '
Matrix Spike Dup (1108061-MSD1)	Sour	ce: E113103-38RE1	Prepared: (08/12/11 Ar	nalyzed: 08	3/1 <u>5/</u> 11.			
EPA 365.1 Total Phosphorus	0.57590	0.010 mg/L	0.50000	0.061700	103	90-110	1.35	10	٠.
Matrix Spike Dup (1108061-MSD2)	Sour	ce: E113202-07	Prepared: (08/12/11 Ar	nalyzed: 08	/15/11			
EPA 365.1 Total Phosphorus	0.56650	0.010 mg/L	0.50000	0.055500	102	90-110	0.628	10	;
Matrix Spike Dup (1108061-MSD3)	Sour	ce: E113108-24	Prepared: (08/12/11 Ar	alyzed: 08	3/15/11·	. `		
EPA 365.1 Total Phosphorus	0.64850	0.010 mg/L	0.50000	0.15510	98.7	90-110	0.405	10	
Matrix Spike Dup (1108061-MSD4)	Sour	ce: E113109-12	Prepared: (08/12/11 Ar	nalyzed: 08	3/15/11			
EPA 365.1 Total Phosphorus	. 0,68550	0.010 mg/L	0.50000	0.20450	96.2	90-110	0.249	10	
MRL Verification (1108061-PS1)			Prepared:	08/12/11 Ar	nalyzed: 08	3/15/11			
EPA 365.1 Total Phosphorus	0.0056000	0.010 mg/L	0.010000		56.0	70-130			MRL-2, QR-1, U
Batch 1108134 - C 353.2 NO3-NO2									
Blank (1108134-BLK1)			Prepared &	& Analyzed:	08/24/11				
EPA 353.2 Nitrate/Nitrite as N	U	0.050 mg/L							. u
LCS (1108134-BS1)			Prepared &	& Analyzed:	08/24/11				
EPA 353.2 Nitrate/Nitrite as N	0.47860	0.050 mg/L	0.50000		95.7	90-110			
LCS Dup (1108134-BSD1)		• .	Prepared &	& Analyzed:	08/24/11				
EPA 353.2 Nitrate/Nitrite as N	0.48840	0.050 mg/L	0.50000		97.7	90-110	2.03	. 10	
								1	

Page 19 of 21 E113109 CNA FINAL 9/8/11 16:31

•			·			•		
· · · · · · · · · · · · · · · · · · ·	, , , , , , , , , , , , , , , , , , ,							
				·				
							· .	
		· ·		· · · · · · · · · · · · · · · · · · ·				
							÷	
			·					•
					• •			
•			•	i.				·



Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Notes and Definitions for QC Samples

U	The analyte was not detected at or above the reporting limit
MRL-2	MRL verification for Non-Potable Water matrix
QM-1	Matrix Spike Recovery less than method control limits
QM-2	Matrix Spike Recovery greater than method control limits
QR-I	MRL verification recovery less than lower control limits.

Page 21 of 21 E113109 CNA FINAL 9/8/11 16:31

·	
`	
-	
1	
· ·	
•	
,	
•	
•	
•	
•	
•	
	•



Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Sample Disposal Policy

Because of the laboratory's limited space for long term sample storage, our policy is to dispose of samples on a periodic schedule. Please note that within 60 days of this memo, the original samples and all sample extracts and/or sample digestates will be disposed of in accordance with applicable regulations. The 60-day sample disposal policy does not apply to criminal samples which are held until the laboratory is notified by the criminal investigators that case development and litigation are complete.

These samples may be held in the laboratory's custody for a longer period of time if you have a special project need. If you wish for the laboratory to hold samples beyond the 60-day period, please contact our Sample Control Coordinator, Debbie Colquitt, by e-mail at <u>Colquitt.Debbie@epa.gov</u>, and provide a reason for holding samples beyond 60 days

Page 2 of 18 E113109 TMTL FINAL 9/1/11 17:55

,
·
. " "
~ ·
,



Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

DATA QUALIFIER DEFINITIONS

U The analyte was not detected at or above the reporting limit.

J The identification of the analyte is acceptable; the reported value is an estimate.

QC-5 Calibration check standard less than method control limits.

ACRONYMS AND ABBREVIATIONS

CAS Chemical Abstracts Service

Note: Analytes with no known CAS identifiers have been assigned codes beginning with "E", the EPA ID as assigned by the EPA Substance Registry System (www.epa.gov/srs), or beginning with "R4-", a unique identifier assigned by the EPA Region 4 laboratory.

- MDL Method Detection Limit The minimum concentration of a substance (an analyte) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero.
- MRL Minimum Reporting Limit Analyte concentration that corresponds to the lowest demonstrated level of acceptable quantitation. The MRL is sample-specific and accounts for preparation weights and volumes, dilutions, and moisture content of soil/sediments.
- TIC Tentatively Identified Compound An analyte identified based on a match with the instrument software's mass spectral library. A calibration standard has not been analyzed to confirm the compound's identification or the estimated concentration reported.

Page 4 of 18 E113109 TMTL FINAL 9/1/11 17:55



Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Total Metals

Project: 11-0592, Hattiesburg North Lagoon CSI

Sample ID: HTNR-0003

Lab ID: <u>E113109-03</u>

Station ID:

Matrix: Rinse Water Blank

Date Collected: 7/27/11 12:36

CAS Number	Analyte	Results Qualifiers	Unuis	MRL Prepared	Analyzed Method
7439-97-6	Mercury	0.10 U	. ug/L	0.10 + 8/23/11 8:50	6729/11 EPA 245-1 75
7429-90-5	Aluminum	100 U	ug/L	100 8/03/11	8/10/11 18:15 EPA 200.7
7440-36-0	Antimony	1.0.0	ug/L	1.0 8/03/11	8/11/11 EPA 200.8
7440-38-2	Arsenic	1.0 U	ug/L	1.0 8/03/11 15:47	8/11/11 20:04 EPA 200.8
7440-39-3	Barium	5.0 U, J, QC-5	ug/L	5.0 1 8/03/11	8/10/11 EPA 200.7
7440-41-7	Beryllium	3.0 U	ug/L	3.0 8/03/11 15:17	8/10/11 EPA 200.7
7440-43-9	Cadmium	0.50 U	ug/L	0,508/03/11 15.47	8/11/11 EPA:200 8
7440-70-2	Calcium	. 250 U	ug/L	250 8/03/11 15:17	8/10/11 18:15 EPA 200.7
7440-47-3	Chromium	5.0 U	ug/L	5.0 8/03/11	8/10/17 EPA 200.7
7440-48-4	Cobalt	5.0 U °	ug/L	,5.0 8/03/11 15:17	8/10/11 18:15 EPA 200.7
7440-50-8	Copper	10.U	ug/L	10 \$8/03/11 15.17	8/10/11 EPA 200.7
7439-89-6	Iron	100 U	ug/L	. 100 8/03/11 15:17	8/I0/II 18:15 EPA 200.7
7439-92-1	Lead ***	U0.L	ug/L	1.0 18/03/11	8/11/11 EPA 200 8
7439-95-4	Magnesium	250 U	ug/L	250 8/03/11 15:17	8/10/11 18:15 . EPA 200.7
7439-96-5	Manganese	5.0 U	ug/L	5.0 8/03/11 15.17	8/10/11 EPA 200.7
7439-98-7	Molybdenum	5.0 U	ug/L	5.0 8/03/11	8/10/11 18:15 EPA 200.7
7440-02-0	Nickel	ίου	ug/L	10 8/03/11	8/10/11 JEPA 200 7
7440-09-7	Potassium	1000 U	ug/L	1000 8/03/11	8/10/11 18:15 EPA 200.7 /
7782-49-2	Selenium	2.0:U	ug/L	2.0 \$\frac{803/11}{15.47}	8/11/11 EPA 200.8 EPA 200.8
7440-22-4	Silver	5.0 U	ug/L	5.0 8/03/11 15:17	8/10/11 18:15 EPA 200.7
7440-23-5	Sodium	≤ 1000 U	ug/L	1000 8/03/11	8/10/11 EPA 200.7
7440-24-6	Strontium	5.0 U	ug/L	5.0 8/03/11 15:17	8/10/11 18:15 EPA 200.7
7440-28-0	Thallium	1.0 U	ug/L	1.0 8/03/11	8/11/11 EPA 200.8
7440-31-5	Tin	15 U	ug/L	15 8/03/11 15:17	8/10/11 18:15 EPA 200.7
7440-32-6	Titanium	5.0 U	ug/L	5.0 \$\\ \begin{array}{c} 8/03/[1] \\ 15.17 \end{array}	8/10/11 18:15 :EPA 200.7
7440-62-2	Vanadium	5.0 U	ug/L	5.0 8/03/11 15:17	8/10/11 18:15 EPA 200.7
7440-65-5	Yttrium	3.0 U	ug/L	3.0 - 8/03/11	8/10/11 EPA 200.7
7440-66-6	Zinc	10 U	ug/L	10 8/03/11 15:17	8/10/11 18:15 EPA 200.7

Page 6 of 18 E113109 TMTL FINAL 9/1/11 17:55

					,			
•			. ,	•				
	,						•	
				· ·				•
							•	
		•		\$ 1				
	·			: .				
				•	•			•
• •						* •		
				•				
					•			
			,					
		•				4		
	\							
			· .		,			
				•				•
						•		
			,			• . •	,	* •
			·					•
	•			•		•		
		•			•	, ···		
					,			
					;		• .	
•					٠.			
					,			
. /						•		
		•	• .	;	•		•	
						÷ .		
					i		•	••
,					•			
			•					
,								
				•			· .	
		Tr		;	•			
				• •			i	
					÷ •			
	e N	•	*	•	•			•
	•			•			•	
			•					
				•				



Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Total Metals (TMTL) - Quality Control US-EPA, Region 4, SESD

Spike

Source

%REC

RPD

Reporting

nalyte	Result	Limit	Units	Level Result %REC Limits RPD Limit Notes
atch 1108015 - M 200.2 Metals Water		<u></u>		
lank (1108015-BLK1)				Prepared: 08/03/11 Analyzed: 08/10/11
PA 200.7				
lver	· · · · · · ·	5.0	ug/L	
senic	U	50		
ırium	·U	5.0	11	
ryllium	. U	3.0	"	
oron	U	50		
dmium	. U	5.0		
obalt	U	5.0		
romium	U .	5.0	*	
pper	U	10	•	
olybdenum ·	. U	5.0		
kel	U	. 10	. •	
ad .	U	20		
timony	U .	40		
enium	U	45		
	U	15	٠.	
ontium	, n	5.0		
anium	U	5.0		
allium	U	30		
nadium	. U	5.0		
trium	U	3,0		
nc	U	10	*	MRL
		10		MICL
uminum	U	100		
nganese	U	5.0	**	
leium	. U	250		
agnesium	. U	250	•	
on ,	U	100		
odium (Ų.	1000	,,	
otassium	U.	. 1000	_	\mathcal{F}_{i}

E113109 TMTL FINAL 9/1/11 17:55

· '
>
•
• .



Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Sciffes

Total Metals (TMTL) - Quality Control US-EPA, Region 4, SESD

%REC

Source

RPD

Reporting

Analyte			Result		Limit	Units	Level	Result	%REC	Limits	RPD ,	Limit	Notes
Batch 1108015 -	M 200.2 Metals Wa	iter							·	<u>.</u>			
Matrix Spike (110	8015-MS1)		Sot	urce: E	113108-	15	Prepared: 0	08/03/11 A	nalyzed: 0	8/10/11			
EPA 200.7				,									**
Silver			104.66		5.0	ug/L	100.00	U.	105	70-130	. '		
Arsenic			210.63		50		200.00	U	105	70-130			
Barium			276.38		5.0	"	200.00	73.113	102	70-130			
Beryllium			52.399		3.0	14	50.000	Ŭ ·	105	70-130			
Boron			134.19		50			131.14		70-130			'
Cadmium	4. ³		50.275		5.0	,	50.000	U	101	70-130			
Cobalt			99.390		5.0	*	100.00	1.0338	98.4	70-130			
Chromium			204.15		5.0	"	200.00	U.	. 102	70-130			
Copper	,	-	144.91	•	10	"	100.00	38.571	106	70-130			٠.
Molybdenum			125.00	•	5.0		100.00	18.275	107	70-130			
Nickel			206.55		10		200.00	3.8845	101	70-130	٠٠.		
ead		1	200.87		20	•	200.00	U	100	. 70-130			
Antimony '			210.08		40	۳.	200.00	U	105	70-130			
Selenium			217.96 ·		45	"	200.00	υ. '	109	70-130			
Tin .			97.092		. 15	•	100.00	U	97.1	70-130			
Strontium		•	382.63		5.0	۳.	100.00	266.90	116	70-130			
Titanium			108.33		5.0	*	100.00	4.8200	104	70-130			
Thallium	·		181.84		30		200.00	· U	90.9	70-130	•		
Vanadium	4		105.73		5.0·	14	100.00	, U	106	70-130		٠.٠	
Yttrium			104.42		3.0	н .	100.00	1.2053	103	70-130			
Zinc	1		307.51		10	"	200.00	92.342	108	70-130			
Aluminum			6076.0		100	; #	5000.0	629.85	109	70-130			
Manganese			645.96		5.0		500.00	116.23	106	70-130			
Calcium			22657		250	,	5000,0	17257	108	70-130			
Magnesium			11372		250	. 14	5000.0	5667.7	114	70-130	• .		
Iron			.7035.9		100		5000.0	1598.6	109	70-130	:		
Sodium			119600		1000		10000	105280	143	70-130			, XM-1
Potassium			28028		1000		10000	18545	94.8	70-130			ANI

Page 10 of 18 E113109 TMTL FINAL 9/1/11 17:55





Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700

D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Total Metals (TMTL) - Quality Control US-EPA, Region 4, SESD

%REC

RPD

Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 1108015 - M 200.2 Metals Water										
Matrix Spike Dup (1108015-MSD1)	Source	e: E113108-15	;	Prepared: 0	8/03/11 At	nalyzed: 08	/10/11			
EPA 200.7	• :									
Silver	98.978	5.0 .	ug/L	100.00	U	99.0	70-130	5.58	. 20	
Arsenic	202.30	50	"	200.00	U .	101	70-130	4.03	20	
Barium	265.93	5.0	u ·	200.00	73.113	96.4	70-130	3.86	20	
Beryllium	50.840	3.0	".	50.000	U	, 102	70-130	3.02	20	
Boron	127.76	50	4		131.14		70-130	4.91	20	
Cadmium	47.942	5.0	. "	50.000	U	95.9	70-130	4.75	20	
Pobalt	94.303	5.0	н .	100.00	1.0338	93.3	70-130	5.25	20	
Chromium	193.31	5.0	•	200.00	. U	96.7	70-130	5.46	. 20	
Copper	139.60	10	19	100,00	38.571	101	70-130	3.73	20	
Molybdenum	117.65	5.0	,	100.00	18.275	99.4	70-130	6.06	20	
lickel	195.43	10		200.00	3.8845	95.8	70-130	5.53	20	
ead many.	190.83	20	ч	200.00	U	95.4	70-130	5.13	20	
Antimony	. 197.92	- 40	4	200.00	. П	99.0	70-130	5.96	20	
elenium	213.27	45	•	200.00	U	107	70-130	, 2.17.	20	
li n	94.633	15	•	100.00	U	94.6	70-130	2.57	20	
Strontium	355.59	5.0		100.00	266.90	88.7	70-130	7.33	20	
litanium ·	. 105.68	5.0		100,00	4.8200	101	70-130	2.47	20	
Thallium .	176.60	30		200.00	U ·	88.3	70-130	2.92	. 20	
Vanadium	100.46	5.0	۳.	100.00	U	100	70-130	5.11	20	
í ttrium	98.686	3.0	ń	100.00	1,2053	97.5	70-130	5.65	20	
Zinc :	292.80	10		200.00	92.342	100	70-130	4.90	20	
Aluminum	5809.7	100	•	5000.0	629.85	104	70-130	4.48	20	
vianganese	615.33	5.0	,	500.00	116.23	99.8	70-130	4.86	20	
Calcium	21525	250		5000.0	17257	85.3	70-130	5.13	20	
Vagnesium	10816	250	н	5000.0	5667.7	103	70-130	5.01	20	
ron	6824.8	100	*	5000.0	1598.6	105	.70-130	3.05	20	
Sodium	112430	1000	**	. 10000	105280	71.4	70-130	.6.18	20	XМ
Potassium	27088	1000	,,	10000	18545	85.4	70-130	3.41	20	All

9/1/11 17:55

•				• .			
	•						
•						•	
		4 × 9		i i	•		
1.							
		:					1
					•		/
•					•		
						·	
	•		*	**			
•			1				
•							
		•					
		* * * * * * * * * * * * * * * * * * * *				•	
				•			
				•			
			• •				
•							
	No.	•		•			
•							
	•				•		
	•					*	
						,	
					:		•
· \		•		$\mathbf{x}_{i}^{(t)}$			
				* * *			
•					•	· · · · · .	
		,					
•		•					
,	÷						
		4.5				:	
		•		•			
•							
	•		•		1.0		
			•				
		w					
				•			
							•
			÷	•			
			** *	•			
				·			
				•			
		•					
		•		•			
		•	2				
•	•				:		
				•			
					•		
						•	
•	1			•			
					•		



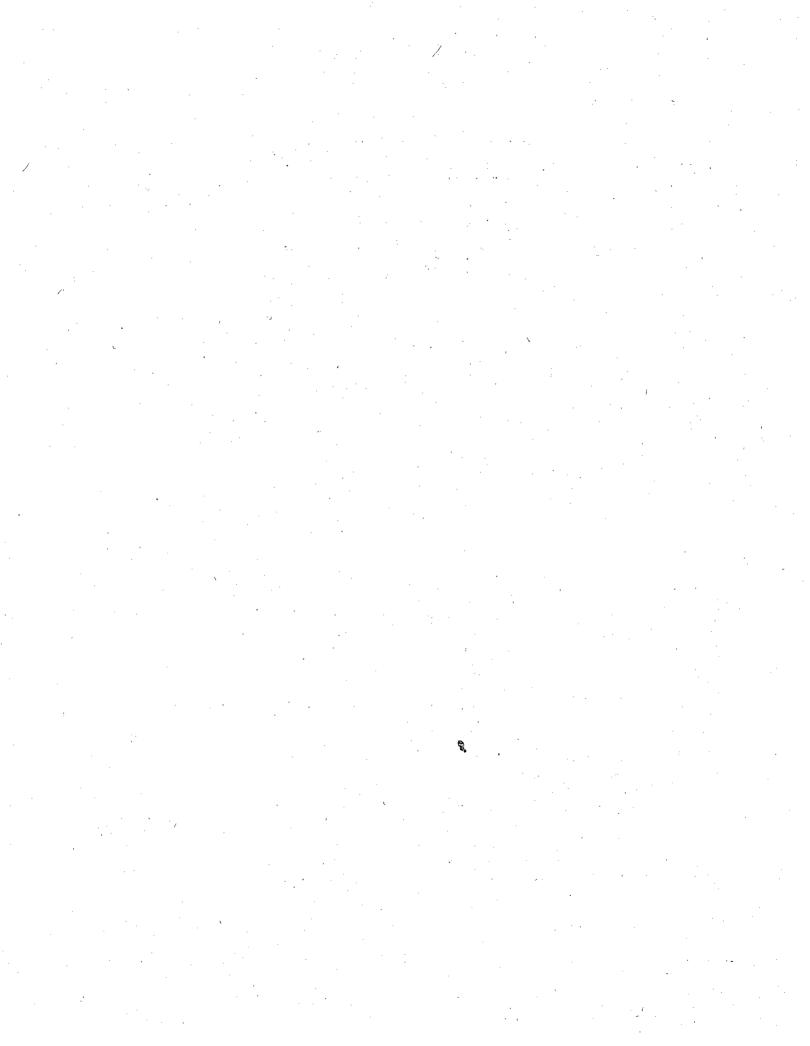
Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Total Metals (TMTL) - Quality Control US-EPA, Region 4, SESD

Analyte	Ręsult	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1108015 - M 200.2 Metals Water										
MRL Verification (1108015-PS1)				Prepared: 08	3/03/11 Az	nalyzed: 08	3/10/11			
EPA 200.7					_		-			
Silver	5.5080	5.0	ug/L	5.0000		110	70-130			MRL-2
Arsenic	45.791	. 50	"	50.000		91.6	70-130			MRL-2,
•										Ü
Barium	6.0554	5.0	. "	5.0000		121	70-130			MRL-2
Beryllium	3.0741	3.0	."	3.0000		102	70-130			MRL-2
Boron	51.086	50	,	50.000		102	70-130			MRL-2
Cadmium	4.9672	5.0	"	5.0000		99.3	70-130			MRL-2,
Cobalt	5.1286	5.0		5.0000		103	70-130	• •		MRL-2
Chromium	5.0481	5.0	.#	5.0000		101	70-130			MRL-2
Соррет	10.100	- 10		10,000		101	70-130			MRL-2
Molybdenum	11.234	5.0		10.000		112	70-130		•	MRL-2
Nickel	11.578	10	**	10.000		116	70 ⁻ 130		,	MRL-2
Lead	19.158	20	. "	20.000		95.8	70-130			MRL-2,
Leau	12.136	20		20.000		, , ,	70-150			U
Antimony	40.471	40	"	40.000		101	70-130			MRL-2
Selenium	50.462	45		45.000		112	70-130			MRL-2
Tin	15.374	15	•	15.000		102	70-130			MRL-2
Strontium	5.5439	5.0		5.0000		111	70-130			MRL-2
Titanium	5.0386	5.0		5.0000	•	. 101	70-130			MRL-2
Thallium	28.767	30		30,000		95.9	70-130			MRL-2,
						`,				ť
Vanadium	4.2505	5.0	"	5.0000		85.0	70-130			MRL-2,
		• •					70.100			J. D. C
Yttrium .	3.1892	3.0		3.0000		106	70-130			MRL-2
Zinc	10.510	g 10	-	10,000		105	70-130			MRL-2
Aluminum	119.29	100		100.00		119	70-130		f	MRL-2
Manganese	5.1329	5.0	" .	5.0000		103	70-130			MRL-2
Calcium	329.18	250		250.00		132	70-130			MRL-2,
Magnesium	273.50	250		250.00		109	70-130			QR-1 MRL-2
Iron ·	110.13	100	10	100.00		110	70-130			MRL-2
		1000		100.00		133				MRL-2,
Sodium	1332.2	. 1000	-	. 1000,0			70-130			QR-2
Potassium	1021.0	1000	,,	1000.0		102	70-130			MRL-2

9/1/11 17:55





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

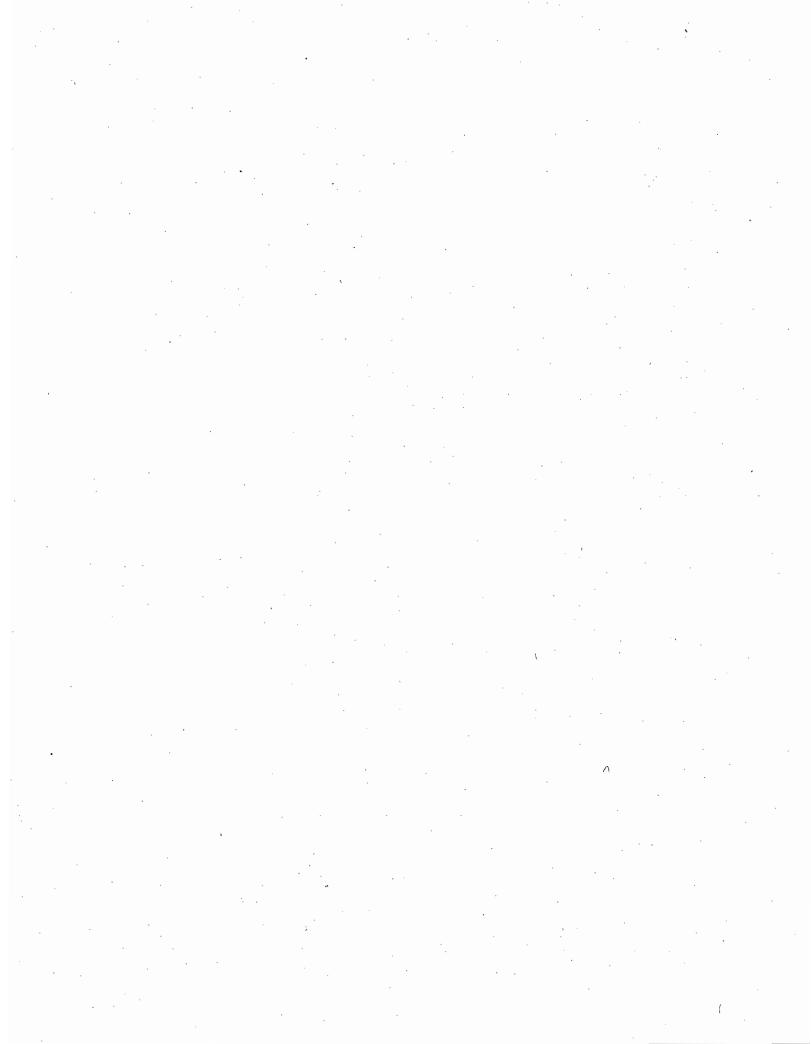
Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Total Metals (TMTL) - Quality Control US-EPA, Region 4, SESD

<i>'</i>		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
atch 1108016 - M 200.2 Metals Water	<u> </u>									
Matrix Spike Dup (1108016-MSD1)	Source	e: E113108-	15	Prepared: (08/03/11 A	nalyzed: 08	711/11		-	
PA 200.8										
Arsenic	203,10	5.0	ug/L	200.00	1.0871	101	70-130	0.178	20	
elenium	205.25	10	"	200.00	- 0.56160	102	70-130	0.444	. 20	
admium	49.223	2.5	"	50.000	0.087054	98.3	70-130	1.44	20	
antimony	193,45	5.0		200.00	0.27743	96.6	70-130	0.984	20	
hallium	207.19	5.0		200.00	U	104	70-130	0.218	20	
ead	199.99	5.0		200.00	1.0380	. 99.5	70-130	0.109	20	
latrix Spike Dup (1108016-MSD2)	Source	e: E113109-	06	Prepared: (08/03/11 A	nalyzed: 08	/11/11			
PA 200.8										
Arsenic	197.63	5.0	ug/L	200.00	0.83490	98.4	70-130	1.28	20	
elenium	200.40	10	. ,	200.00	U	100	70-130	2.02	20	
admium .	48.329	2.5	"	50.000	. П	96.7	70-130	1.19	20	
intimony	191.09	5.0		200.00	0.29339	95.4	70-130	1.12	20	
hallium	206.79	5.0	"	200.00	U	103	70-130	0.652	20	
ead	200.19	5.0	•	200.00	1.7675	, 99.2	70-130	1.28	20	
					**				·	
(IRL Verification (1108016-PS1)				Prepared: (08/03/11 Ai	nalyzed: 08	2/11/11			
PA 200.8										
ursenic	0.98602	. 1.0	ug/L	1.0000	!	98.6	65-135			MRL-
elenium	2.0654	2.0	"	2.0000		· 103	65-135			MRL
admium	0.47697	0.50		0.50000		95.4	65-135			MRL-
untimony .	0.51639	1.0	P	0.50000		103 .	65-135			MRL-
hallium .	0.54100	1.0	• .	0.50000		108	65-135			MRL-
ead	0.70817	1.0	"	1.0000		70.8	65-135			MRL-
	•									
Batch 1108099 - M 245.1 Hg Wtr					,					
Blank (1108099-BLK1)				Prepared &	k Analyzed:	08/23/11				
PA 245.1						•				

Page 16 of 18 E113109 TMTL FINAL 9/1/11 17:55





Page 18 of 18

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 4 Science and Ecosystem Support Division 980 College Station Road, Athens, Georgia 30605-2700 D.A.R.T. Id: 11-0592

Project: 11-0592, Hattiesburg North Lagoon CSI - Reported by Jenny Scifres

Notes and Definitions for QC Samples

U	The analyte was not detected at or above the reporting limit.
B-3	Level in blank does not impact data quality
MRL-2	MRL verification for Non-Potable Water matrix
QC-5	Calibration check standard less than method control limits.
QC-6	Calibration check standard greater than method control limits.
QR-2	MRL verification recovery greater than upper control limits.
XM-1	Sample background/spike ratio higher than method evaluation criteria

E113109 TMTL FINAL 9/1/11 17:55

·	
•	
	v.
ŧ	
· ·	· ·
· ·	
,	•
•	

TABLE OF CONTENTS

1.0	Introduction		4
2.0	Objectives		4
3.0	Study Area		4
4.0	Methods		4
5.0	Results		5
5.1	Hattiesburg South Wastewater 1	reatment Plant	5
5.2	. Hattiesburg North Wastewater T	reatment Plant	6
6.0	Quality Assurance		7
7.0	Conclusion		8
8.0	References		8
End o	f Report		10

	·
٠.	
	·

1.0 Introduction

At the request of Richard Elliot of the EPA Region 4 Science and Ecosystem Support Division (SESD), Enforcement and Investigations Branch (EIB), the Ecological Assessment Branch (EAB) conducted dye tracer studies to determine the time of travel in the Hattiesburg South and Hattiesburg North Wastewater Treatment Plants in Hattiesburg, Mississippi as part of compliance sampling inspections led by EPA.

Dye studies were conducted under Quality Assurance Project Plans prepared by the EIB project leader for compliance sampling inspections at each facility.

2.0 Objectives

The primary objective of this survey was to conduct dye tracer studies to determine the time of travel in the Hattiesburg South and Hattiesburg North Wastewater Treatment Plants in Hattiesburg, Mississippi.

3.0 Study Area

For the North plant an outfall pipe located at the chlorination basin was monitored during this study. After equipment setup at the monitoring location, the dye tracer study commenced with a release of dye at the Northwest side of the lagoon near the main discharge into the treatment plant.

For the South plant an outfall pipe located at the chlorination basin was monitored during this study. After equipment setup at the monitoring location, the dye tracer study commenced with a release of dye at the Southwest side of the lagoon near the main industrial discharge into the treatment plant.

Site	Latitude	Longitude
North Plant Monitoring Site	N 31° 21.677′	W 089° 20.261′
North Plant Dye Release	N 31° 21.623′	W 089° 19.972′
South Plant Monitoring Site	N 31° 18.138′	W 089° 16.254′
South Plant Dye Release	N 31° 18.917′	W 089° 15.549′

Table 1: Locations of Study Sites

4.0 Methods

At both plants a single "instantaneous" release of Rhodamine WT was conducted at a main discharge into the treatment plant. Monitoring for Rhodamine WT dye was conducted at the plants' outfall pipes using YSI Data Sondes. The sondes were utilized

		•
•		
•		
	•	
•		
	•	
		. ^
,	· ·	
	, ''	
	•	•
	• .	
	_	
	•	
	•	
		•
· · · · · · · · · · · · · · · · · · ·		
	•	
•	, ·	
		,
	•	
	•	
	,	•
	•	
	•	
	·	
	, , , , , , , , , , , , , , , , , , , ,	· ·

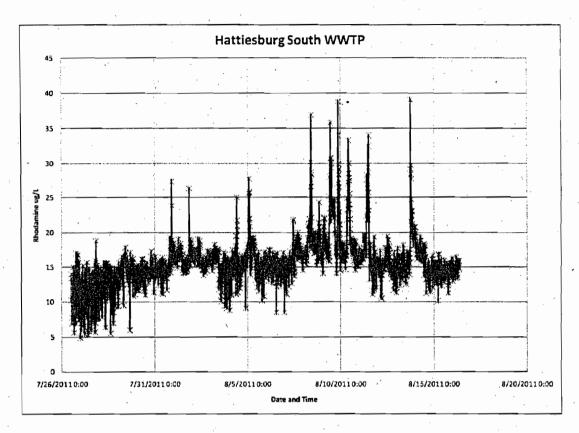


Figure 1: Hattiesburg South WWTP Dye Tracer Data

5.2 Hattiesburg North Wastewater Treatment Plant

At approximately 1620 on July 26, 2011, at the Hattiesburg North Wastewater Treatment Plant a sonde was deployed in order to measure background readings in the outfall.

An "instantaneous" Rhodamine WT release was conducted at 1500 on July 27, 2011. Following the release, the sonde was left deployed for an extended period of time in an effort to ensure that the dye cloud was captured by the equipment. The sonde was retrieved for its location at approximately 900 on August 16, 2011. The data collected by the sonde is illustrated in the Figure 2. It should be noted that at approximately 1600 on August 9 the sonde discontinued the logging program.

			,				
	. •		· · · · · · · · · · · · · · · · · · ·				
•		•	•	•			
		•					
•		* *					
					,		
	V -	e de la companya de l	v			•	
		No. of the second					
				ii.			
•					,		
ı	•	1		4			
•						4	
	• •						
			· 				
		,					
•						•	
	_					· ·	
	•		•				
				•			
							•
					•		
							,
			• • •			v	
·					•		
				٠.			
			• .				
• .	•		•		•		
			,				
•			•				
·						·	•
		•	•				
		r :				•	
•				•			
				• 1			

7.0 Conclusion

On July 26, 2011, the Ecological Assessment Branch of EPA/SESD initiated two dye tracer studies in Hattiesburg, Mississippi. The studies were designed to determine the time of travel of the Hattiesburg North and Hattiesburg South Wastewater Treatment Plants. The studies consisted of an "instantaneous" release of Rhodamine WT at both treatment plants followed by monitoring at the plants' outfall.

Unusually high background levels from the Hattiesburg South WWTP combined with no clear initial detection of dye precluded determination of a time of travel. Data spikes were detected at intermittent intervals throughout the entire duration of the study but are most likely the result of the background levels found in the lagoon. At the time of the instrument's retrieval, elevated levels of dye beyond the back ground levels had not been detected therefore it can be concluded that most of the dye remained in the plant for a time period the exceeded the sonde deployment.

The discontinuation of the sonde logging program at the Hattiesburg North WWTP precluded determination of a precise time of travel. It is evident that the first elevated sign of dye was detected on July 28 at approximately 0530. An estimated centroid was calculated from the data set in order to produce an estimated time of travel. The estimated centroid reached the monitoring station on August 4 at 0815 equating to a time of travel of 8.13 days. From the results it can be concluded that even though the concentration levels, at the time the sonde discontinued logging, were slightly higher then the initial background level the majority of the dye had been released from the system.

8.0 References

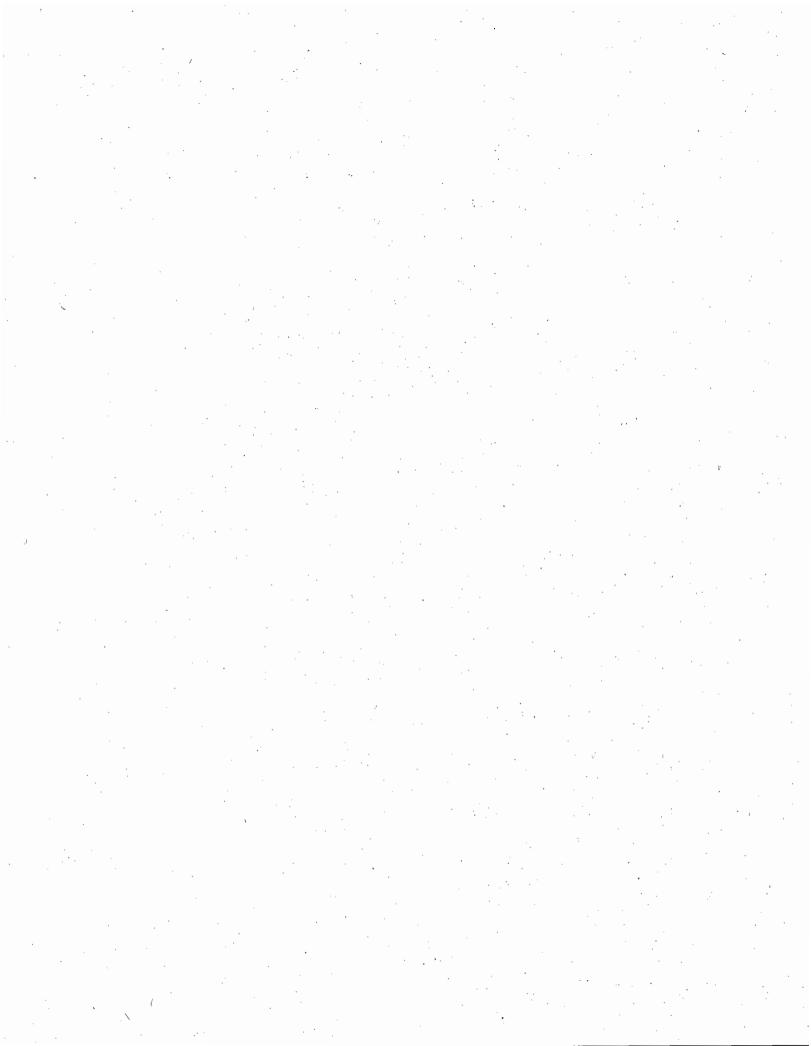
Operating Procedure for Global Positioning System, SESDPROC-110-R3, 2011, Region 4, SESD, Athens, Georgia.

Operating Procedure for In-Situ Water Quality Monitoring, SESDPROC-111-R2, 2009, Region 4, SESD, Athens, Georgia.

Operating Procedure for Hydrological Studies, SESDPROC-501-R2, 2009, Region 4, SESD, Athens, Georgia.

Operating Procedure for Dye Tracer Measurement, SESDPROC-514-R0, 2009, Region 4, SESD, Athens, Georgia.

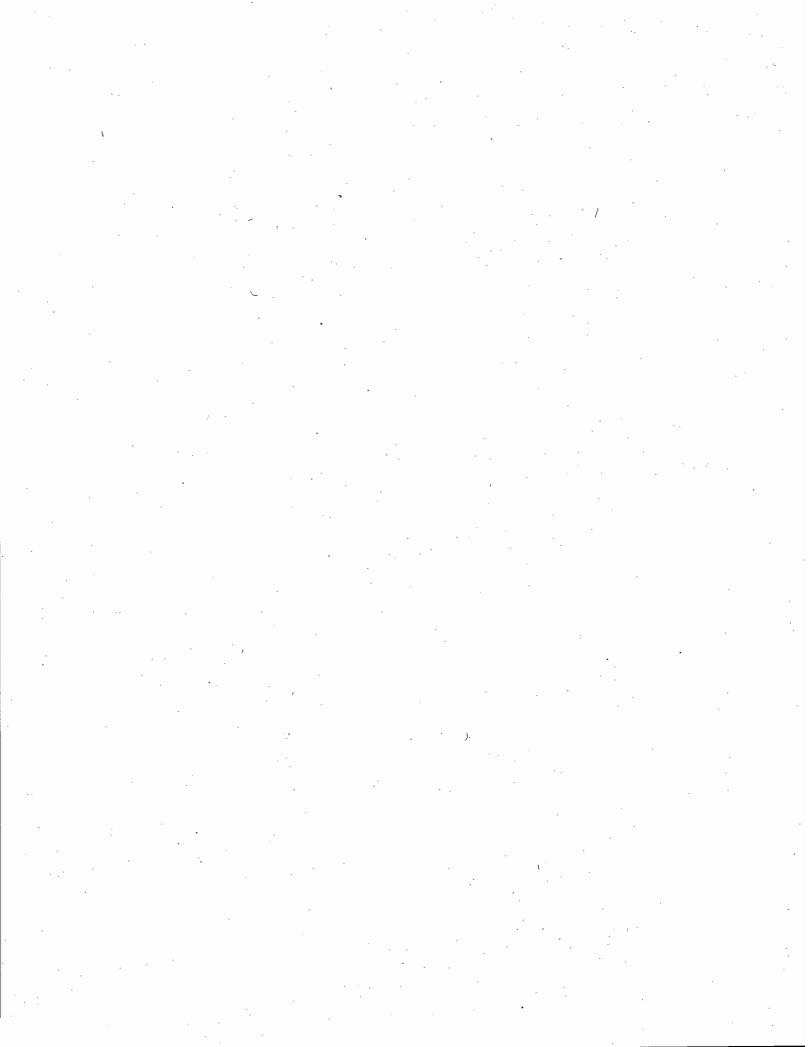
Operating Procedure for Surface Water Sampling, SESDPROC-201-R1, 2007, Region 4, SESD, Athens, Georgia.



End of Report

	·
·	
	·
•	,
	•
	,
	•
	·
·	

,							
44	7/26/2011 22:20	26.02	0.134	6.62	36.9	83.4	6.76
45	7/26/2011 22:30	25.98	0.135	6.63	35.7	83.3	6.76
46	7/26/2011 22:40	25.95	0.136	6.65	38.4	83.9	6.81
47	7/26/2011 22:50	25.95	0.136	6.63	35	82.5	6.7
48	7/26/2011 23:00	25.92	0.136	6.63	39.3	82.2	6.68
49	7/26/2011 23:10	25.91	0.135	6.62 .	42.4	82.4	6.69
50	7/26/2011 23:20	25.86	0.135	6.63	47.3	83.2	6.77
51	7/26/2011 23:30	25.84	0.135	6.62	47.7	82.9	6.74
52	7/26/2011 23:40	25.82	0.136	6.63	52.1	82.5	6.71
53	7/26/2011 23:50	25.81	0.136	6.62	50.1	81.9	6.67
54	7/27/2011 0:00	25.79	0.135	6.61	53.5	80.8	6.58
55	7/27/2011 0:10	25.78	0.135	6.6	49.1	80.9	6.59
56	7/27/2011 0:20	25.74	0.137	6.63	· 57.3	81.1	6.61
57	7/27/2011 0:30	25.73	0.135	6.6	51	80.7	6.58
58	7/27/2011 0:40	25.69	0.136	6.61	54.3	81	6.61
59	7/27/2011 0:50	25.63	0.135	6.61	54.1	82.2	6.71
60	7/27/2011 1:00	25.61	0.135	6.61	56.7	81.7	6.68
61	7/27/2011 1:10	25.61	0.135	6.6	57.4	79.9	6.53
62	7/27/2011 1:20	25.53	0.136	6.61	49.8	81.7	6.68
63	7/27/2011 1:30	25.51	0.136	6.62	49.8	81.6	6.68
64	7/27/2011 1:40	25.52	0.137	6.61	52.5	80.6	6.59
65 ·	7/27/2011 1:50	25.49	0.137	6.62	47	80	6.55
66	7/27/2011 2:00	25.44	0.137	6.63	45.9	81	6.64
67	7/27/2011 2:10	25.43	0.136	6.61	44.3	80.2	6.58
68	7/27/2011 2:20	25.43	0.136	6.6	48.3	79.3	6.5
69	7/27/2011 2:30	25.33	0.135	6.6	39.1	82	6.73
70	7/27/2011 2:40	25.34 /	0.137	6.61	41.8	80.5	6.61
71	7/27/2011 2:50	25.35	0.138	6.61	42.2	79.1	6.49
72	7/27/2011 3:00	25.28	0.136	6.62	37.1	81.4	6.69
73	7/27/2011 3:10	25.27	0.137	6.63	34.7	81.4	6.69
74	7/27/2011 3:20	25.24	0.136	6.61	36.7	81.5	6.7
75	7/27/2011 3:30	25.23	0.136	. 6.61	36.3	81.2	6.68
76	7/27/2011 3:40	25.21	0.138	6.62	35.9	80.2	6.6
77	7/27/2011 3:50	25.2	0.138	6.63	33.3	81.1	6.67
78	7/27/2011 4:00	25.18	0.137	6.61	32.2	81.7	6.72
79	7/27/2011 4:10	25.18	0.139	6.64	31.2	81.6	6.72
80	7/27/2011 4:20	25.17	0.138	6.63	34.3	80.3	6.62
81	7/27/2011 4:30	25.15	0.138	6.62	33.4	80.4	6.62
82 [.]	7/27/2011 4:40	25.15	0.139	6.62	34.2	78.9	6.5
83	7/27/2011 4:50	25.12	0.138	6.62	30.6	80.7	6.65
84	7/27/2011 5:00	25.11	0.138	6.62	32.2	81.9	6.75
85	7/27/2011 5:10	25.11	0.138	6.61	31.9	81	6.68
86	7/27/2011 5:20	25.11	0.139	6.61	32.4	80	6.6
87	7/27/2011 5:30	25.08	0.138	6.61	31.2	80.3	6.62
88	7/27/2011 5:40	25.08	0.138	6.6	31.8	81.5	6.72
89	7/27/2011 5:50	25.07	0.139	6.62	32.7	80.7	6.65
90	7/27/2011 6:00	25.05	0.14	6.62	29.6	79.8	6.58



ATTACHMENT 3 (Sonde Data)

138	7/27/2011 14:00	27.07	0.138	6.62	29.7	86.2	6.86
139	7/27/2011 14:10	27.12	0.139	6.62	28.8	86.7	6.89
140	7/27/2011 14:20	27.16	0.139	6.62	28.5	85.9	6.82
141	7/27/2011 14:30	27.26	0.138	6.62	27.6	86.6	6.87
142	7/27/2011 14:40	27.26	0.139	6.62	36.8	85.8	6.81
143	7/27/2011 14:50	27.26	0.139	6.61	27.3	85.4	6.77
144	7/27/2011 15:00	27.29	0.139	6.62	28.8	85.6	6.78
145	7/27/2011 15:10	27.35	0.14	6.62	. 28.2	85.9	6.8
146	7/27/2011 15:20	27.36	0.14	6.62	25.9	84.8	6.71
147	7/27/2011 15:30	27.41	0.14	6.62	35.7	84.8	6.7

•	•			
	•	· ,	•	
			;	
		•		
•				
		•		
		•	•	·
			:	•
•			•	
·				
		•		•
·				
	•	•		•
			÷	
•				
		•		
			•	
•		,		
		.,		
	•			
			· · · · · · · · · · · · · · · · · · ·	
		•		
			•	
*	•			
•		·		
•				
·	•		1	
	•			
		•	•	
				•
	•		•	
			· · · · · · · · · · · · · · · · · · ·	
			}	
·				
				•
				,
•				
				·
		·		
		•		• • •

Detention Time = Volume/Flow

Lagoons 1

Design Detention time = $10.4 \times 10^6/4.0 \times 10^6$

= 2.6 days

Average Detention time = $10.4 \times 10^6/2.2 \times 10^6$

= 4.7 days

Lagoons 3

Design Detention time = $6.6 \times 10^6/4.0 \times 10^6$

= 1.7 days

Average Detention time = $6.6 \times 10^6/2.2 \times 10^6$

= 3.0 days

Total Detention Time

= 4.3 days at Design flow

= 7.7 days at Average flow

Typical Range:

4 – 10 days [Mechanically Aerated Lagoons]

7 – 30 days [Facultative Naturally Aerated Lagoons]

Calculated detention times may be slightly longer since the small amount of time wastewater spends in lagoon #2 is not included in the above calculations.

Organic Loading Rate (OLR) = (Flow*BOD*8.34)/Area

Average Influent BOD

= 289 mg/L

Lagoon 1

OLR at Design Flow

= (4.0*289*8.34)/5.32

= 1,819.1 | lbm/acre.day

	•		·		
		•		^,	
			. •		
				2	
· · · · · · · · · · · · · · · · · · ·					
· · · · · · · · · · · · · · · · · · ·					
	,				
	•		*.		
					·
		: : :			
					
				•	





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION 4

Enforcement and Investigations Branch 980 College Station Road Athens, Georgia 30605-2720

July 21, 2011

4SESD-EIB

MEMORANDUM:

SUBJECT: Compliance Sampling Inspection

Hattiesburg South & Hattiesburg North Wastewater Treatment Plant

Mile Min For

Hattiesburg, Mississippi

SESD Project ID: 11-0591, 11-0592 (respectively)

FROM:

Richard Elliott, P.E.; Environmental Engineer

Enforcement Section

THRU:

Mike Bowden, Chief

Enforcement Section

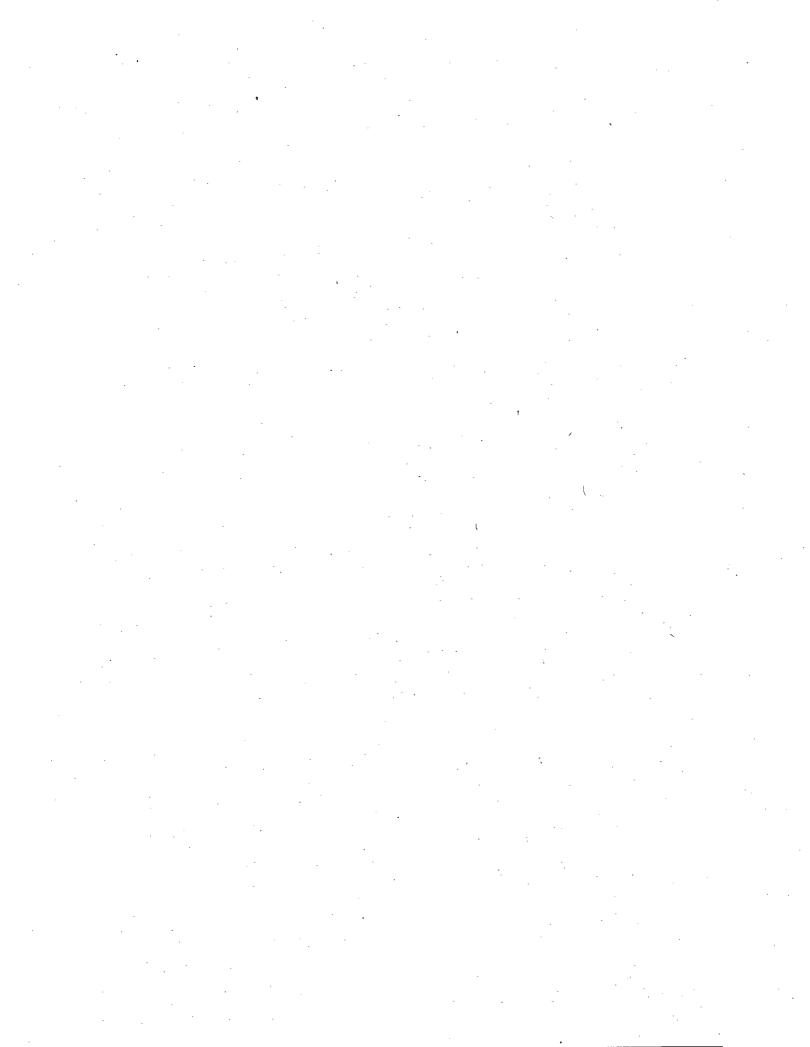
TO:

Cesar Zapata, Chief

Municipal & Industrial Enforcement Section

Water Protection Division

Attached are copies of the Quality Assurance Project Plans for the Compliance Sampling Inspections (CSI) that will be conducted at the Hattiesburg South and Hattiesburg North Wastewater Treatment Plants on July 25 – 29, 2011. These facilities are located in Hattiesburg, Mississippi. The attached documents have not been distributed; please forward copies to the appropriate parties as needed. If you have any questions, please contact me by telephone at (706) 355-8631, or via email at Elliott.Richard@epa.gov.





Quality Assurance Project Plan U.S. Environmental Protection Agency

Science and Ecosystem Support Division 980 College Station Road Athens, GA 30605

SESD Project ID: 11-0591 SESD Category 3 QAPP

SESD:	Samples will be analyzed in accordance with the SESD Analytical Support Branch Laboratory Operations and Quality Assurance Manual, January 2011.
CLP:	N/A
Other: MDEQ	Samples will be analyzed by MDEQ in accordance with their standard analytical procedures.

B5. Quality Control

The following is a brief description of field and laboratory quality control measures to be implemented during this field investigation:

Field:	Field quality control measures will be in accordance with the SESD Operating Procedure for Field Sampling Quality Control, SESDPROC-011-R3, and 40 CFR Part 136.
Laboratory:	The MDEQ laboratory personnel will conduct all quality control analyses in accordance with their most current operating procedures. SESD analyses adhere to the quality control measures specified in the SESD Analytical Support Branch Laboratory Operations and Quality Assurance Manual, January 2011.

B6. Instrument/Equipment Testing, Inspection and Maintenance

All field measurement instruments and equipment will be maintained in accordance with the SESD Operating Procedure for Equipment Inventory and Management, SESDPROC-108-R3.

B7. Instrument/Equipment Calibration and Frequency

All field measurement instruments and equipment are calibrated according to the SESD Operating Procedure for Equipment Inventory and Management, SESDPROC-108-R3 and according to specific procedures included within the defined operating procedures for each instrument (see specific field measurement procedures in Section B2 of this QAPP).

B8. Inspection/Acceptance for Supplies and Consumables

All critical supplies and consumables for this field investigation are inspected and maintained in accordance with the following procedures:

SESD Operating Procedure for Purchasing of Services and Supplies, SESDPROC-015-R3. SESD Operating Procedure for Field Sampling Quality Control, SESDPROC-011-R3.

The SESD Field Quality Manager and the Branch Quality Assurance Officers are responsible for ensuring that these requirements are met.

•
:
•
•
•
•
•
•
· ·



Quality Assurance Project Plan U.S. Environmental Protection Agency

Science and Ecosystem Support Division 980 College Station Road Athens, GA 30605

SESD Project ID: 11-0591 SESD Category 3 QAPP

B9. Non-direct Measurements:

N/A

B10. Data Management

The field project leader will be responsible for ensuring that all requirements for data management are met. All data generated for this field investigation, will be recorded, stored and managed accordance with the following procedures:

SESD Operating Procedure for Control of Records, SESDPROC-002-R5. SESD Operating Procedures for Logbooks, SESDPROC-010-R4.

SECTION C: Assessment/Oversight and SECTION D: Data Validation/Usability

The SESD Field Branches Quality Management Plan (QMP) and the SESD Operating Procedures address the Assessment/Oversight and Data Validation/Usability elements as required. Please consult those documents for more detailed information concerning the SESD Field Branches Quality System.

**Footnotes: This Quality Assurance Project Plan (QAPP) has been prepared and approved according to the EPA Requirements for Quality Assurance Project Plans (EPA QA/R5 EPA/240/B-01/003), U.S. Environmental Protection Agency, Office of Environmental Information, Washington, DC, March 2001(USEPA, 2001). This document will be used to ensure that the environmental data collected for this project are of the type and quality for the intended purposes. This document is for SESD use only.

:

٠.



Quality Assurance Project Plan

U.S. Environmental Protection Agency Science and Ecosystem Support Division 980 College Station Road Athens, GA 30605

SESD Project ID: 11-0591 SESD Category 3 QAPP

	SECTION A: Project Planning Eleme	nts		
A1. Title (Project Name):	Hattiesburg South WWTP - Complian	nce Sampling Inspection		
Project Location:	1903 East Hardy St., Hattiesburg, MS	39401		
Project Requestor and Organization:	Cesar Zapata, Chief Municipal & Industrial Enforcement Section Water Protection Division USEPA – Region IV 61 Forsyth St. SW, Atlanta GA 30303-8960			
Project Leader's Name, Position, and Organization:		Richard Elliott, Environmental Engineer Enforcement & Investigations Branch (EIB)/Enforcement Section (ES)		
Project Leader's Signature:	BAH	Date: 7/2/2011		
Technical Reviewer's Name and Position:	John Williams, Environmental Scienti	st		
Technical Reviewer's Signature:	Mondo for	Date: 7/25/11		
Section Chief/DAO's Name and Position:	Mike Bowden, Chief (ES)			
Section Chief/DAO's Signature:	White Mill to	Date: 7/22/11		
A2. Table of Contents	N/A	1		
A3. Distribution List	Hard Copy: Cesar Zapata, Chief Muni Section Electronic Copy: Mike Bowden, Chief			
A4. Project Personnel (list below):	Organization (list below):	Responsibilities (list below):		
Richard Elliott	EIB/ES	Project Leader		
Louis Salguero	EIB/ES	Safety Officer		
John Williams	EIB/ES	Sampler		
Cornell Gayle	EIB/ES	Sampler Traince		
Hunter Johnson	EAB/ES	Surface Water Sampler		
Derek Little	EAB/ES	Surface Water Sampler		
Brian Herndon	ESAT	Scribe/Sampler		
A5. Problem Definition (Objectives) and Background:	SESD will collect samples at the Hattiesburg South WWTP located in Hattiesburg, MS to determine if the facility meets the requirements of their NPDES permit. A cursory look at the DMR data for this facility			

·		
		en en en en en en en en en en en en en e
**		
	•	
· · · · · · · · · · · · · · · · · · ·		
		•



Quality Assurance Project Plan
U.S. Environmental Protection Agency
Science and Ecosystem Support Division
980 College Station Road
Athens, GA 30605

SESD Project ID: 11-0591 SESD Category 3 QAPP

SESD Category 3 QAPP	
	revealed that they may not be meeting some of the limits specified in the NPDES permit. In addition, concerns regarding the color of the discharge from the facility into the receiving waters, and suspected mal odors emanating from the facility have precipitated this inspection.
	This project is a compliance sampling inspection (CSI). SESD will collect 24-hr composite samples of the influent and effluent wastewater streams. A composite sample will be collected if possible, from one of the major industrial discharger to the treatment facility. If a composite sample is not possible for any industrial facility connected to the WWTP, grab samples will be collected wherever feasible.
	Grab samples for specific parameters outlined in NPDES permit MS0020303 will be collected (see section B1).
A6. Project Description:	Additional grab samples will be collected upstream and downstream of the WWTP effluent discharge point in the receiving water. These surface water samples will be analyzed for BOD ₅ , TSS, Ammonia Nitrogen (NH3-N), nitrite (NO2), nitrate (NO3), Total Kjeldahl Nitrogen and total phosphorus (TP). Continuous monitoring of dissolved oxygen, pH, conductivity, turbidity and temperature will be conducted over a 24-hr period in the receiving waters using an automatic data logging instrument.
	Dissolved oxygen, pH, and temperature measurements will be made at various points within the treatment facility.
	A rhodamine dye tracer test will be conducted to ascertain the hydraulic detention time of the wastewater in the facility. An overall evaluation of the operating procedures at the WWTP
	During this inspection, an evaluation of the self monitoring program of the facility will be conducted.
	Quality Assurance (QA) preservative blanks will be analyzed for nutrients and metals.
Decision(s) to be made based on data:	SESD will evaluate the information gathered and provide all results and inspection reports to be utilized by USEPA Region 4 personnel in compliance decisions.

		•		
•				
•	•			
•				÷
*				
				•
				•
`			,	
			•	•
		•	•	
			•	
	. /			
. *			· .	
				٠
			<i>)</i>	
			•	
•				
			*.	
	• :			
•			•	
	. •			
•				Ċ
		· · · · · · · · · · · · · · · · · · ·		
,				
				•
		· .		
•			•	
• •		•		
	•		• .	
	•	•		
;				
		•		
			<i>f</i> .	
				•
	•		,	



Quality Assurance Project Plan U.S. Environmental Protection Agency

Science and Ecosystem Support Division 980 College Station Road Athens. GA 30605

SESD Project ID: 11-0591 SESD Category 3 QAPP

Applicable regulatory information, action levels	40 CFR Part 122 40CFR Part 136 NPDES Permit MS0020303
Field Study Date:	July 25 – 29, 2011
Projected Lab Completion Date:	September 16, 2011.
Projected Final Report Completion Date:	The final report is expected to be completed within 30-days of receiving the analytical results from the laboratory. The anticipated completion date is October 14, 2011. The appropriate personnel will be notified if the expected report completion date cannot be met.

A7. Quality Objectives and Criteria

All samples/sample locations meet the field investigation objectives and purposes summarized in Sections A5 and A6 of this QAPP.

A8. Special Training/Certifications

N/A.

A9. Documents and Records

For this project, SESD will implement the following procedures pertaining to Documents and Records:

SESD Operating Procedure for Report Preparation and Distribution, SESDPROC-003-R3.

SESD Operating Procedure for Logbooks, SESDPROC-010-R4.

SESD Operating Procedure for Control of Records, SESDPROC-002-R5.

SECTION B: Data Generation and Acquisition

B1. Sampling Design

The following matrix lists the proposed numbers and types of samples to be collected. Sample locations are described in Section A6 of this QAPP. As specified by the facility's NPDES permit, influent and effluent sample locations will be selected. Grab samples will be collected authoritatively based on conditions during the inspection.

Media:	Number of Samples:	Analyses:
Wastewater/Surface Water	(2) 24-hr composite	Biochemical Oxygen Demand (BOD), Total Suspended Solids

	• .		
	•		
	•		
		•	•
•			
	· · · · · · · · · · · · · · · · · · ·		. ,
		•	
		•	
		•	
•			



Quality Assurance Project Plan U.S. Environmental Protection Agency

Science and Ecosystem Support Division 980 College Station Road Athens, GA 30605

SESD Project ID: 11-0591 SESD Category 3 QAPP

. :		(TSS), Nutrients (Nitrogen & Phosphorous)
	7 Grab and/or in-situ	pH, Dissolved Oxygen (DO), Bacterial (E. coli), Nutrients (Nitrogen & Phosphorous) – Upstream & Downstream of Effluent Discharge, Preservative Blank (Nutrients), Temperature Blank

B2. Sampling Methods, General Procedures

The following SESD field measurement and sampling procedures will be followed during this field study, as applicable:

SESD Operating Procedure for Field pH measurement, SESDPROC-100-R2

SESD Operating Procedure for Field temperature measurement, SESDPROC-102-R3

SESD Operating Procedure for Field dissolved oxygen measurement, SESDPROC-106-R2

SESD Operating Procedure for Field wastewater flow measurement, SESDPROC-109-R2

SESD Operating Procedure for Global Positioning Systems, SESDPROC-110-R3

SESD Operating Procedure for Field wastewater sampling, SESDPROC-306-R2

SESD Operating Procedure for Field surface water sampling, SESDPROC-201-R1

SESD Operating Procedure for Field Dye Tracer Measurement, SESDPROC-514-R0

Composite samples will be collected using an ISCO 3700 or 6700 automatic sampler.

B3. Sampling Handling and Custody

All samples will be collected and handled according to the procedures listed in Section B2 of this QAPP. After collection, samples will be managed according to the following:

SESD Operating Procedure for Sample and Evidence Management, SESDPROC-005-R1. SESD Operating Procedure for Packing, Labeling and Shipping of Environmental and Waste Samples SESDPROC-209-R2.

Sample analyses will be divided between the Mississippi Department of Environmental Quality (MDEQ) and the SESD Region 4 laboratory. The MDEQ laboratory will analyze samples for Fecal Coliform. SESD Region 4 laboratory will analyze for all other parameters listed in this document. Custody of samples relinquished to MDEQ will be maintained by MDEQ personnel in accordance with their respective operating procedures. Samples retained by SESD will be handled in accordance to the procedures specified in this document. A copy of all original chain-of-custody form used in this project will be maintained by SESD personnel as part of the project file.

B4. Analytical Methods

The following is a brief description of the analytical methods for this field investigation:

		•					
							•
•	:		*. *	* .			
		•	•				
			•				
	•		•				
					• •	¥	
						•	
		•	•				
•							
,							
							•
		•	•			•	
						4	
						•	
						•	
•							
•							
•	•						
·			•				•
•							
							4
		•			•		
	·	:				•	•
			•				
1	•						
							•
•							
		•			•		
			**				
	•	•					
• .							•
•				•			
(•	•	•				
					•		
•		•	•			•	
			•		•		
		٠					
	. •						
							•
						•	
•		•					
•		•					
					:		
·							
•		•			•		
	•			•			
					•		
		•					
•							
·					•		
	}				*.		
	•	•	•				
	. *	1	•				

SESD INTERNAL QA/R5 QAPP REVIEW CHECKLIST

NOTE: This checklist is designed to satisfy the requirements for the Region 4, Quality Management Plan DAO review.

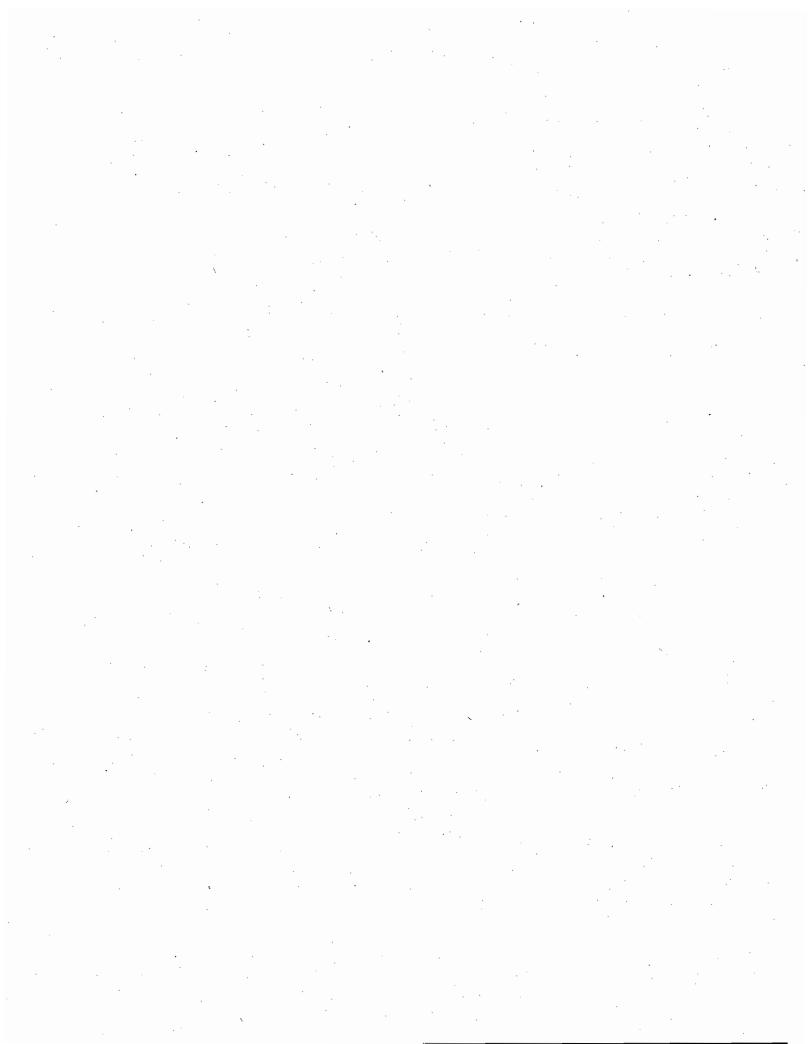
Review Date	07/13/2011					
SESD Project Category	3					
Project Name	Hattiesburg South WWTP					
Project Location	Hattiesburg, MS					
Originating Organization	SESD					
Project Leader	Richard Elliot					
DAO Reviewer	Mike Bowden					

DAO Review Checklist

DAO Review Checklist			
Group A: Project Managemen	it i		
ELEMENT	YES	NO	COMMENTS
A1. Title and Approval Sheet			
Title			
Organization's name	7		
Date, name, position and signature of individual that prepared QAPP			
Date, name, position and signature of approving Section Chief or designee			0 //
Other signatures, as needed			an tina
A2. Table of Contents			N/A
A3. Distribution List			
A4. Project/Task Organization	•		
Identifies key individuals, with their responsibilities (data users, decision-makers, project QA manager, subcontractors, etc.)			ta, and the second
Organization chart shows lines of authority and reporting responsibilities	1/		
A5. Problem Definition/Background			2 + 1 -0
Clearly states problem or decision to be resolved	1/	١	add dotail
Provides historical and background information			
A6. Project/Task Description			1000
Lists measurements to be made	V		ald detail 1
Cites applicable technical, regulatory, or program-specific quality standards, criteria, or objectives	~		on industrial
Notes special personnel or equipment requirements	,		N/A
Provides work schedule	1		
Notes required project and QA records/reports	ارما	,	
A7. Quality Objectives and Criteria for Measurement Data			
States project objectives and limits, both qualitatively and quantitatively			
States and characterizes measurement quality objectives as to applicable action levels or criteria			
A8. Special Training Requirements/Certification Listed			N/A
States how provided, documented, and assured			
A9. Documentation and Records			
Lists information and records to be included in data report (e.g., raw data, field logs, results of QC checks, problems encountered)	1		
States requested lab turnaround time	1/		
Gives retention time and location for records and reports	-		

					•	.*
•						•
		•	•			,
	•		•			
	•					
•	•	•				•
	•					
•						
		t v			* * *	
				•		
		•				
	•	4 a			•	
						v
·	•	•				
						/
	•	•				
	•					
						• * .
	•	• •	•	•		
					•	
		·				
·		٠.				
<i>,</i>						
•				**	•	•
		*				•
				•		
		•	•			
	•	•				
•						
						·
		•		•	•	
			• •	•		
		•				
			•		•	
	•		•		•	* * * * * * * * * * * * * * * * * * *
	•					
	•			<i>t</i> *	1	
•		· ·		•		
			•	•		
				•		
•						•
		,			•	
•	•	~				
•						
			•	•		
					-	
· · ·						
		•	•			•
•						

ELEMENT	YES	NO	COMMENTS
31. Sampling Process Design (Experimental Design)			
Type and number of samples required	V,		fue w
Sampling design and rationale		. ;	320 11
Sampling locations and frequency	V		Why 7 locations
Sample matrices			(sular)
Classification of each measurement parameter as either critical or needed for needed for normation only			N/A
Appropriate validation study information, for nonstandard situations			N/A
32. Sampling Methods Requirements	1		.:
dentifies sample collection procedures and methods	1		
Lists equipment needs	√.		
dentifies support facilities	7		,
dentifies individuals responsible for corrective action	1		,
Describes process for preparation and decontamination of sampling equipment	1		
Describes selection and preparation of sample containers and sample volumes	1		
Describes preservation methods and maximum holding times	1		•
33. Sample Handling and Custody Requirements	1		
Notes sample handling requirements	1		
Notes chain-of-custody procedures, if required	1		
34. Analytical Methods Requirements	1		· ·
dentifies analytical methods to be followed (with all options) and required equipment	1		
Provides validation information for nonstandard methods	1		
dentifies individuals responsible for corrective action	17	· _	
Specifies needed laboratory turnaround time	1		
35. Quality Control Requirements	1		
dentifies QC procedures and frequency for each sampling, analysis, or neasurement technique, as well as associated acceptance criteria and corrective action	1		
References procedures used to calculate QC statistics including precision and bias/accuracy	1		· ·
B6. Instrument/Equipment Testing, Inspection, and Maintenance Requirements	1		
dentifies acceptance testing of sampling and measurement systems	1.	· ·	
Describes equipment preventive and corrective maintenance	1		
Notes availability and location of spare parts	1		
37. Instrument Calibration and Frequency	1		_
dentifies equipment needing calibration and frequency for such calibration	1		
Notes required calibration standards and/or equipment	1		
Cites calibration records and manner traceable to equipment	1		
38. Inspection/Acceptance Requirements for Supplies and Consumables	 		·
States acceptance criteria for supplies and consumables	1		
Notes responsible individuals	1		
·	1		NI/A
39. Data Acquisition Requirements for Nondirect Measurements dentifies type of data needed from nonmeasurement sources (e.g., computer latabases and literature files), along with acceptance criteria for their use			N/A N/A



Documents rationale for original collection of data and its relevance to this project		N/A
B10. Data Management	\checkmark	
Describes standard record-keeping and data storage and retrieval requirements	V	
Checklists or standard forms attached to QAPP	1	
Describes data handling equipment and procedures used to process, compile, and analyze data (e.g., required computer hardware and software)	√ .	
Describes process for assuring that applicable Office of Information Resource Management requirements are satisfied	7	

Group C: Assessment and Overs	ight		nides (III)
ELEMENT	YES	NO	COMMENTS
C1. Assessments and Response Actions	1		
Lists required number, frequency and type of assessments, with approximate dates and names of responsible personnel (assessments include but are not limited to peer reviews, management systems reviews, technical systems audits, performance evaluations, and audits of data quality)			
Identifies individuals responsible for corrective actions	$\sqrt{}$		
C2. Reports to Management	√		
Project status	1		
Results of performance evaluations and audits	√		
Results of periodic data quality assessments	1		
Any significant QA problems	1		
Preparers and recipients of reports	7		

Group D: Assessment and Oversi	ght.				
ELEMENT	YES	NO	CO	MMENT	Ś
D1. Data Review, Validation, and Verification	1				
States criteria for accepting, rejecting, or qualifying data	√ .	,			
Includes project-specific calculations or algorithms	1				•
D2. Validation and Verification Methods	₩.				
Describes process for data validation and verification	1				
Identifies issue resolution procedure and responsible individuals	V				
Identifies method for conveying these results to data users	1				
D3. Reconciliation with User Requirements	7				
Describes process for reconciling project results with DQOs and reporting limitations on use of data	√				

Approved, no comments
Approved with comments, resubmittal not required
Conditionally approved, comments must be addressed, resubmittal required
Not approved, comments must be addressed, resubmittal required

Section Chief Signature

Date
7 21 11

	. •					
		•				
•						•
	•		• .	•		•
				-		•
	•		-			
		. •				
					•	• •
•	•	•		•		· · · · · · · · · · · · · · · · · · ·
			•			
•						
	·.					
		• 1				
•				÷		1 .
•	•		. • .	•	•	·
	·					,
		•			•	
						· .
•						
	•					•
•		• .	•			
•	,					•
		•				
·						
		,				•
·						
· .					•	
	•					,
			-			
•	•				•	
		,				•
•	· ,	· ,	•		• .	
	·					· · · · · · · · · · · · · · · · · · ·
•			•	•		
. :						
	· · ·				•	
		•		· · · · · ·		
						•
		•				
* -		*,		• .	·	
•						ř
•						
6						
	•	•				
	•		•			
•						
					,	
	·					•
	•	•				
• .						
	•					
			.*			

Additional Comments, if applicable

Date

References

EPA Requirements for Quality Assurance Project Plans, EPA QA/R-5, March 2001, EPA/240/B-01/003, Guidance for Quality Assurance Project Plans, EPA QA/G-5, December 2002, EPA/240/R-02/009 (Available from EPA's Website: http://www.epa.gov/quality)

			. ,	
			•	·
		•		
			•	
			•	
• 1				
	•		÷	
			•	
			•	
		•		
	•		e de la companya de l	
			•.	
•				
		•		
		· · · · · · · · · · · · · · · · · · ·		
	•			
		•		
			•	
			•	
			•	•
	:			
	,			
			•	
				·
			•	Ç
				•
				•
·				

NON-HAZARDOUS WASTE MANIFEST

INDUSTRIAL POLLUTION CONTROL, INC. 810 Poindexter Street

810 Poindexter Street Jackson, Mississippi 39204 (601) 355-2448

MEMA	EMERGENCY	PHONE
NO. (60	01) 352-9110	

E.P.A. I. D. #

NO. (601) 352	-9110						
Date called in	776	Time in	Dat Time Out	Date <u>9-/7-9/</u> Time Out <u>////0</u>			
Truck #					11.576		
NAME	ITY OF	PETA	<u></u>				
STREET	P.O. BOX	564		PHONE NO			
CITY 107	<u> </u>		STATE	STATE MS ZIP			
CUSTOMER	E.P.A. ID#		CONTACT	CONTACT PERSON			
•			CONTRACT YES	S() NO	K.		
			INVOICE IN	FORMATION			
IT	EMS		GALLONS	PER	PER GALLON		
WASTE OIL	· ·	2/	0				
OIL FILTER	S						
SLUDGE							
WASTE WA	TER						
WASTE AN	TIFREEZE				, ,		
	TOTAL	<u> </u>			TOTAL		
CASH	СНЕСК	NO.	CHARGE	C. O. D.		P. O. NO	
Comments _							
		7/12e			GStoners	Ú	
	I. P. C. Repi (Recy			Company Representative (Generator)			
HAZA	ARDOUS WASTE CE	RTIFICATE			HALOGENS		

							<u> </u>
	•		• .		.*		
,							·
	•						
				,			
		*					
		•	•		•		•
•	•	•					
				,			•
	$\mathcal{L}_{\mathcal{A}} = \{ (1, 2, \dots, 2, n) \mid x \in \mathcal{A} \mid x \in \mathcal{A} \}$						
					.•		٠.
					•		
•			1	•		•	
			•	٥,			
•							
							•
				•			•
•	<i>i</i>						
				•			
			٠				
,	;	•					
•		•** .					
	· · ·						
	•	•					
•					. ,		•
	•				•	•	
	,						-
							٠.
•							
				•	•		
				**			•
				·			
. *		:		· .			,
	•				. •		
•			,				
	1						
		· ·					
	•						
			•			٠,	
					٥,		
			•				
	•	·			•	·	
	.*		•			· · · · · · · · · · · · · · · · · ·	
1							